



شركة طرق الرياض للمقاولات
RIYADH ROAD CONTRACTING CO.



شركة
ساني العامرية
SANY Alameriah Co.



مكتب رمك للإستشارات الهندسية
RAMAK ENGINEERING CONSULTANTS OFFICE

FROM : من :
شركة طرق الرياض للمقاولات المحدودة

المطور : شركة ساني العامرية
TECHNICAL SUBMITTAL

To : إلى :
مكتب رمك للاستشارات الهندسية

مشروع تنفيذ اعمال البنية التحتية بمخطط تلال الغروب رقم 1837 / 1 / س - جده
Block (1&3&5&10&11&12&13)

SUBMITTAL NO. :	115	NEW SUBMITTAL ☒	RE SUBMITTAL ☐	SUBMITTAL DATE : - 07-OCT.-2024	
TRANSMITTAL FOR :		METHOD STATEMENT ☐	CALCULATIONS ☐	CATALOGUE ☐	CERTIFICATE ☐
MATERIAL TEST ☒		TEST RESULTS ☐	SAMPLE ☐	DRAWING ☐	STRUCTURAL ☐
PROJECT MANAGEMENT ☐	EARTH WORK ☒	SEWAGE ☐	ELECTRICAL ☐	WATER ☐	CIVIL ☒
الموقع	BLOCK-03-10-11-13		ATTACHMENT : ☒		
NO.	NAME AND DESCRIPTION	MANUFACTURER / SUPPLIER		CONTRACT REF.	ACTION CODE
1	ASPHALT MIX DESIGN BITUMINOUS BASE COURSE (BBC SP) ✓ (BWC SP)	شركة انجاز الطرق للمقاولات المحدودة RACO			A
CONTRACTOR'S REMARKS				SIGNATURE التوقيع	
				Contractor	
				PROJECT MANAGER	
				م / محمد غمري	
INFRASTRUCTURE CONSULTANT COMMENTS :				SIGNATURE التوقيع	
لما نفع من اعتماد ال BBC حيث أنه تم إيماد من الزمانه لمشاريع أخرى.				Consultant	
بالنسبة ل BWC نرجو تقديم الاعتمادات الخاصة بـ				PROJECT MANAGER	
				م / فهمي عبد الله	
DEVELOPER PROJECT MANAGER COMMENTS :				Developer	
				PROJECT MANAGER	
				م / علاء شلتوت	
				See Attachment ☒	

A = APPROVED B = APPROVED AS NOTED C = APPROVED AS NOTED, RESUBMIT E = DISAPPROVED F = NO ACTION

REF. IN :

DEC OUT :



الموضوع: بأخذ عينة من طبقة الأساس الاسفلتية بنظام سوبر بيف (BBC SP)

نسخة /السادة استشاري الإشراف شركة تراكبيل للاستشارات الهندسية (للمتابعة)
المحترمين
شركة إنجاز الطرق للمقاولات المحدودة ص.ب ٤٤٤٦٧ جدة ٢١٥٨١ س.ت ٤٠٣٠١٤٨٧٩١
المحترمين
السلام عليكم ورحمة الله وبركاته،

إشارة الى خطاب شركة تراكبيل للاستشارات الهندسية رقم ٤٥٠٠٢٥٤٥٤٧ بتاريخ ١٤٤٦/٠٢/٢٥ هـ والمشار فيه الى خطاب إدارة تنفيذ الطرق رقم ٤٥٠٠٢٥٤٥٤٧ بتاريخ ١٤٤٥/١٢/٢١ هـ المبني على خطابكم رقم ٢٠٢٤/٣/٤٣٥ بتاريخ ١٤٤٥/١٢/١٨ هـ بشأن تحديث اعتماد الخلطة الاسفلتية (BBC SP) .

حيث وردنا بذات الخصوص خطاب استشاري الأمانة شركة تراكبيل للاستشارات الهندسية المتضمن بأخذ عينة من طبقة الأساس الاسفلتية بنظام سوبر بيف (BBC SP) بأشراف مختبر خارجي معتمد من الأمانة (مختبر عبدالكريم منصور) وذكر الاتي :

- ١- تم فحص تصميم خلطة الاسفلت من قبل مختبر عبدالكريم منصور وفقاً للمعايير والتقارير المرفقة.
- ٢- وفقاً لخطاب وتقرير نتائج العينة التجريبية المرفقة والصادر عن المختبر فان العينة تتطابق ع تصميم خلطة طبقة الأساس الاسفلتية (BBC SP) طبقاً للمواصفات المعتمدة في العقد.
- ٣- مرفق نسخة من نتائج خطة الأساس الاسفلتية سوبر بيف (BBC SP) المعتمد من مختبر عبدالكريم منصور للمشاريع الواردة بالخطاب كما اوضح الاستشاري بان سيواصل اعمال اختبارات اللازمة لضمان الجودة دورياً على الاعمال المنفذة باستخدام الخلطة.

للاطلاعكم واكمال اللازم والتقيد بما ورد بالتقارير المرفقة من المختبر والاستشاري لخطة الأساس الاسفلتية سوبر بيف

(BBC SP).

والسلام عليكم ورحمة الله وبركاته

مدير عام الطرق والجسور

م. صالح بن أحمد البواري

١٤٤٦/٠٣/٠٩ هـ

Date	: 01 July 2024	التاريخ	: 25 ذي الحجة 1445 هـ
Ref. No.	: TE-KSA-JM-251-24	رقم المرجع	: TE-KSA-JM-251-24
JM Ref.	: 4500254547	رقم الأمانة	: 4500254547
Projects Title	: 1. Asphalt, pavement, and street lighting for residential streets in North Jeddah - Project ID: 16871.	اسم المشاريع	: 1- سفلتة وارصفة وانارة شوارع وطرق احياء شمال جدة رقم العقد 16871.
	: 2. Asphalt for plot layouts within the jurisdiction of Tayyibah Sub-Municipality (Phase Two) - Project ID: 16980.		: 2- سفلتة مخططات المنح في نطاق بلدية طيبة الفرعية (المرحلة الثانية) رقم العقد 16980.
	: 3. Asphalt for plot layouts within the jurisdiction of North Obhur Sub-Municipality (Phase Two) - Project ID: 17022.		: 3- سفلتة مخططات المنح في نطاق بلدية أبحر الشمالية الفرعية (المرحلة الثانية) رقم العقد 17022.
	: 4. Asphalt for plot layouts within the jurisdiction of Dhahban Sub-Municipality (Phase Two) - Project ID: 16979.		: 4- سفلتة مخططات المنح في نطاق بلدية ذهبان الفرعية (المرحلة الثانية) رقم العقد 16979.
	: 5. Street repair project in central and northern Jeddah and construction of a road west of Riyadh neighborhood in northern Jeddah.		: 5- مشروع اصلاح الشوارع وسط وشمال محافظة جدة وانشاء طريق غرب مخطط الرياض شمال محافظة جدة .
Attention	: Eng. Saleh Al-Bukhari , Respected Director General of Bridges and Tunnels, Jeddah Municipality.	عناية	: المهندس/ صالح البخاري المحترم مدير عام الجسور والأنفاق أمانة محافظة جدة
Subject	: <u>Regarding the update of Approval for the Asphalt Mix (BBC SP)</u>	الموضوع	: <u>بخصوص تحديث اعتماد الخلطة الاسفلتية (BBC SP).</u>

After Greetings,

تحية طيبة وبعد ،،،،

Referring to the correspondence received from the Roads Implementation Department at the Jeddah Municipality number 4500254547, on 27/06/2024. Based on Road Accomplishment Ltd Company registered letter with Jeddah Municipality number 3435/A/2024 on 24/06/2024. Regarding the update of the Asphalt Mix (BBC SP) for the mentioned projects. And your Excellency request to Completing the necessary procedures regarding approval of the letter after ensuring that it complies with the terms and specifications according to the contract.

بالإشارة إلى المعاملة المحالة إلينا من إدارة تنفيذ الطرق بأمانة محافظة جدة برقم 4500254547 وتاريخ 1445/12/21 هـ والمبنية على خطاب المقاول شركة انجاز الطرق للمقاولات المسجل لدى أمانة محافظة جدة برقم 3435/أ/2024 بتاريخ 1445/12/18 هـ بشأن تحديث اعتماد الخلطة الاسفلتية (BBC SP) للمشاريع المذكورة أعلاه ، وطلب مساعدتكم إكمال الإجراءات اللازمة بخصوص اعتماد الخطاب بعد التأكد من مطابقتها للشروط والمواصفات حسب العقد.

Therefore, we inform you that the Tractable Engineering took a sample of the asphalt base Coarse Super Pave System (BBC SP) under the supervision of external laboratory accredited by the Jeddah Municipality (Abdul Karim Mansour Laboratory). We inform you of the following:

عليه، نفيد سعادتكم بأنه قد قامت شركة تراكتبل الهندسية بأخذ عينة من طبقة الأساس الاسفلتية بنظام السوبر بيف (BBC SP) بإشراف مختبر خارجي محايد معتمد من قبل أمانة محافظة جدة (مختبر عبدالكريم منصور) وتم الاتي :

1- The asphalt mix design was examined by Abdul Karim Mansour Laboratory (an external laboratory accredited by the Jeddah Governorate Municipality) in accordance with the attached standards and reports.

1- تم فحص تصميم خلطة الاسفلت من قبل مختبر عبدالكريم منصور (مختبر خارجي محايد معتمد من قبل أمانة محافظة جدة) وفقاً للمعايير والتقارير المرفقة.

2- According to the attached letter and report of the results of the experimental sample issued by the laboratory, the sample conforms to the design of the asphalt base layer mix (BBC SP) and in accordance with the specifications and contract.

Therefore, a copy of the results of the Superpave asphalt base course (BBC SP) is attached to you, certified by Abdul Karim Mansour Laboratory (an external laboratory accredited by the Jeddah Governorate Municipality) for above mentioned projects, for review and approval, as is the practice in road projects, as we confirm that we will continue periodic and random quality assurance tests on the works. Implemented using the mixture as followed.

Yours faithfully,

2-وفقا لخطاب وتقرير نتائج العينة التجريبية المرفق والصادر عن المختبر، فإن العينة تتطابق مع تصميم خلطة طبقة الأساس الإسفلتية (BBC SP) وطبقا للمواصفات المعتمدة في العقد.

وعليه، مرفق لكم نسخة من نتائج خلطة الأساس الإسفلتية سوبريف (BBC SP) معتمدة من مختبر عبدالكريم منصور (مختبر خارجي محايد معتمد من قبل أمانة محافظة جدة) للمشاريع المذكورة أعلاه للاطلاع والاعتماد كما هو متبع في مشاريع الطرق، حيث نؤكد بأننا سنواصل اختبارات ضمان الجودة دوريا وعشوائيا على الأعمال المنفذة باستخدام الخلطة كما هو متبع.

وتفضلوا بقبول فائق الاحترام والتقدير،



مدير البرنامج
شركة تراكتيبل الهندسية
م / عبدالله الصبان

الموضوع: بخصوص تحديث اعتماد الخلطة الاسفلتية (BBC SP)

السادة / مدير عام الطرق والجسور – أمانة محافظة جدة
صورة للسادة / استشاري امانة محافظة جدة شركة تراكبيل للاستشارات الهندسية
المحترمين
تحية طيبة وبعد ،،،

بالإشارة الى خطاب السادة استشاري امانة محافظة جدة السادة شركة تراكبيل للاستشارات الهندسية رقم (TE-KSA-CON-002-24) وتاريخ ٢٠٢٤/٠٥/٠٧م والمبني على المعاملة الواردة من امانة محافظة جدة رقم (٤٥٠٠٢٥٤٥٤٧) وتاريخ ١٤٤٥/١٠/١٤ هـ والمشار فيها الى خطابنا رقم (٢٠٢٤/١/٣٣١٠) وتاريخ ١٤٤٥/١٠/١٤ هـ بشأن طلبنا تحديث اعتماد الخلطة الاسفلتية (BBC SP) وطلب سعادة مدير عام الطرق والجسور الاطلاع واعتماد الخلطة الاسفلتية المذكورة أعلاه بعد درستها ومراجعتها وفق المتطلبات الخاصة لكراسة المواصفات والاشتراطات.

وطلب السادة الاستشاري مراجعة مختبر معتمد لأخذ العينات من الخلطة الاسفلتية (BBC SP) لأجراء الاختبارات اللازمة والتحقق من تصميمي الخلطة المقدمة من قبلنا بالتنسيق مع شركة تراكبيل الهندسية، وحيث أنه تم اجراء الاختبارات اللازمة المطلوبة بالتنسيق مع شركة تراكبيل الهندسية في مختبر خارجي معتمد.

عليه نأمل من سعادتكم التكرم بالتوجيه لمن يلزم حيال تحديث اعتماد الخلطة الاسفلتية (BBC SP).

ولكم جزيل الشكر والتقدير ،،،

مدير المشاريع
م / محمد الحمزي



المرفقات :

- طلبات الفحص المقدمة والمقبولة من استشاري لويس برجر
- نتائج الاختبارات والفحوصات اللازمة من مختبر معتمد



Document Submittal

Project Name:	ASPHALTING & SIDEWALKS STREETS LIGHTING AND ROAD OF NEIGHBORHOODS NORTH OF JEDDAH		
Contractor:	ROAD ACCOMPLISHMENT LTD.CO.	TE Project ID:	R4-22007
Contract No.:	4/00/06/0601/001/05/19	Contractor Ref #:	0133
Location:	ALL AREA & DISTRICT AT PROJECT.	Date:	3-Jun-24

Please check appropriate box:

☐ Letter	☐ Technical Report	☐ Drawings
☐ Technical Submittal	☐ GIS or CAD	☐ Shop Drawing
☐ Bill of Quantities	☐ Job Order	☐ Reports
☐ Procedure or Methodology	☐ Engineering Calculation	☐ Test Reports
☐ PM Plan	☐ Schedule	☐ Permissions
☐ Product Data	☐ As Built	☐ Request for Information
☐ Pre-qualification	☐ Certificates	☐ Manuals
☐ Material Sample	☐ Job Order Completion	☒ Others (RESULT)

Purpose: ☐ For Information ☒ For Review & Approval ☐ As Requested

Subject: **ATTACHED TEST RESULT OF ASPHALT BBC & BVC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.**
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24

Document Description:

SR. No.	Document No.	Job Order # / BoQ #	Document Name	Rev.	Hard Copy	Soft Copy
			ATTACHED TEST RESULT AS PER IR # 812		✓	

TB Review & Approval Status

- ☒ A - Approved (Work may proceed)
☐ B - Approved as Noted (Work may proceed subject to Incorporation of Comments)
☐ C - Revise and Resubmit (Work may not proceed)
☐ D - Rejected ☐ E - For Information

Discipline / Review Status

QA/QC
Name: Islam Elsherbiny
Sign:
Date: 04/06/2024

Project Engineer Review & Approval Status

Name:
Sign:
Date: 04/06/2024

Comments:

As per attached 3rd party letter and test result Report, Asphalt BBC superpave found satisfactory.

Contractor Project Manager & Stamp

Name:

Sign:

TE Document Control Stamp

03 JUN 2024

Received

Received by:

TE Project Director

Name:

Sign:

Date:

Motaz Gharbi

4-6-2024

10/6

		
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Work Inspection Request			
Work Inspection Request should be submitted - at least - 24 hours prior to inspection			
Project Name:	ASPHALTING & SIDEWALKS STREETS LIGHTING AND ROAD OF NEIGHBORHOODS NORTH OF JEDDAH		
Contractor:	ROAD ACCOMPLISHMENT CO.LTD.	TE Project ID:	R4-22007
Contract No.:	4/00/06/0601/001/05/19	Contractor Ref #:	JO [1/ IR [0812]
Location:	RACO PLANT.	Inspection Date:	16-May-24
Attachments		Inspection Time	08:30 AM
☐ Drawing ☐ Specification ☐ BoQ ☐ Job Order ☐ Calculation sheet ☒ Others			
Attachment Ref #:			
Inspection Request Description:			
CHECK & TAKE SAMPLE FROM ASPHALT BBC & BWC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.			
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24			
I certify that the above items have been checked and found conforming to specified requirements.			
Requested By:		Date: 15-May-24	
(Contractor's Rep./QC Engineer)			
☐ Inspection to be conducted by	☐ Roads	☐ Electrical/Lighting	☐ HSE
☐ Bridges/Tunnels	☐ Gardens	☐ Facilities	☒ QA/QC
☐ Mechanical	☐ Survey		
TE Inspection Result			
☐ A - Approved – work may proceed ☒ B - Approved as noted – work may proceed subject to incorporation of comments ☐ P - Approved with Penalty ☐ C - Not Approved		☐ D - Other: _____ ☐ E - Rejected (NCR No. _____) Please see attached NCR ☐ NR- Work Not Ready	
TE Site Inspector Remarks:		TE Site Inspector	
		Name: _____	
		Signature: _____	
		Date & Time: _____	
TE Surveyor Remarks:		TE Surveyor	
		Name: _____	
		Signature: _____	
		Date & Time: _____	
TE QA/QC Inspector:		TE QA/QC Inspector	
Asphalt BBC Taking Sample Batch Plant for mix design approval and send to 3rd Party AAM lab, final approval subject to QC		Name: Tamara Almoal	
		Signature: _____	
		Date & Time: 21/05/2024	
General Comments: witness test report, subject to test result report			
TE Sr. Construction / QC Engineer:		TE Document Control Reference #	
Name: Islam Elsherbiny			
Signature: _____			
Date: 21/5/2024			
		Contractor Representative:	
		Received By: _____	
		Signature: _____	
		Date: 28-05-2024	

		
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Document Submittal

Project Name:	Asphalting Donated Lands in Taiba Municipality - Part 2 16980		
Contractor:	ROAD ACCOMPLISHMENT LTD.CO.	TE Project ID:	R4-23004
Contract No.:	001/0851/00/00/4	Contractor Ref #:	018
Location:	ALL AREA & DISTRICT AT PROJECT.	Date:	3-Jun-24

Please check appropriate box:

☐ Letter	☐ Technical Report	☐ Drawings
☐ Technical Submittal	☐ GIS or CAD	☐ Shop Drawing
☐ Bill of Quantities	☐ Job Order	☐ Reports
☐ Procedure or Methodology	☐ Engineering Calculation	☐ Test Reports
☐ PM Plan	☐ Schedule	☐ Permissions
☐ Product Data	☐ As Built	☐ Request for Information
☐ Pre-qualification	☐ Certificates	☐ Manuals
☐ Material Sample	☐ Job Order Completion	☒ Others (RESULT)

Purpose: ☐ For Information ☒ For Review & Approval ☐ As Requested

Subject: **ATTACHED TEST RESULT OF ASPHALT BBC & BWC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.**
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24

Document Description:

SR. No.	Document No.	Job Order # / BoQ #	Document Name	Rev.	Hard Copy	Soft Copy
			ATTACHED TEST RESULT AS PER IR # 57		✓	

TB Review & Approval Status

- ☒ A - Approved (Work may proceed)
☐ B - Approved as Noted (Work may proceed subject to Incorporation of Comments)
☐ C - Revise and Resubmit (Work may not proceed)
☐ D - Rejected ☐ E - For Information

Discipline / GIS Review Status

QA/QC

Name: Islam Elsherbiny

Sign: 

Date: 04/6/2024

Project Engineer Review & Approval Status

Name: Mohamed Fouad

Sign: 

Date: 04/6/2024

Comments:

As per attached 3rd party letter and test result Report for Asphalt BBC superpave found Satisfactory.

Contractor Project Manager & Stamp Name:  Sign: 	TE Document Control Stamp  Received  Received by:	TE Project Director Name: Abdallah AlSabban Sign:  Date:
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Work Inspection Request			
Work Inspection Request should be submitted - at least - 24 hours prior to inspection			
Project Name:		Asphalting Donated Lands in TIBA Municipality - Part 2 16980	
Contractor:		TE Project ID:	R4-23004
Contract No.:		Contractor Ref #:	JO [] / IR [0057]
Location:		Inspection Date:	18-May-24
Attachments		Inspection Time	08:30 AM
☐ Drawing	☐ Specification	☐ BoQ	☐ Job Order
		☐ Calculation sheet	☒ Others
Attachment Ref #:			
Inspection Request Description:		فروع شركة تراكتيبيل انجنييرنج TRACTEBEL Engineering Branch 16 MAY 2024	
CHECK & TAKE SAMPLE FROM ASPHALT BBC & BWC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.			
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24			
I certify that the above items have been checked and found conforming to specified requirements.			
Requested By:		المستلم	
(Contractor's Rep./QC Engineer)		16-May-24	
☐ Inspection to be conducted by		☐ HSE	
☐ Roads	☐ Electrical/Lighting	☐ Facilities	☒ QA/QC
☐ Bridges/Tunnels	☐ Gardens	☐ Mechanical	☐ Survey
TE Inspection Result			
☐ A - Approved – work may proceed ☒ B - Approved as noted – work may proceed subject to incorporation of comments ☐ P - Approved with Penalty ☐ C - Not Approved		☐ D - Other: _____ ☐ E - Rejected (NCR No. _____ Please see attached NCR) ☐ NR- Work Not Ready	
TE Site Inspector Remarks:		TE Site Inspector	
		Name:	
		Signature:	
		Date & Time:	
TE Surveyor Remarks:		TE Surveyor	
		Name:	
		Signature:	
		Date & Time:	
TE QA/QC Inspector: Asphal BBC - S-P Batch plant trial mix design sample has taken and send to 3rd Party AAM lab. final approval subject to		TE QA/QC Inspector	
General Comments: Qc witness quality test report. Subject to test result Report		Name: Tawar Ahmad	
		Signature: Tawar Ahmad	
		Date & Time: 21/05/2024	
TE Sr. Construction / QC Engineer:		TE Document Control Reference #	
Name: Islem Elsherbiny			
Signature: [Signature]		Contractor Representative:	
Date: 21/5/2024		Received By:	
		Signature: [Signature]	
		Date: 28-05-2024	

		
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Document Submittal

Project Name:	Asphalting Donated Lands in Dahban Municipality - Part 2 16979		
Contractor:	ROAD ACCOMPLISHMENT LTD.CO.	TE Project ID:	R4-23005
Contract No.:	001/0851/00/00/4	Contractor Ref #:	0016
Location:	ALL AREA & DISTRICT AT PROJECT.	Date:	3-Jun-24

Please check appropriate box:

☐ Letter	☐ Technical Report	☐ Drawings
☐ Technical Submittal	☐ GIS or CAD	☐ Shop Drawing
☐ Bill of Quantities	☐ Job Order	☐ Reports
☐ Procedure or Methodology	☐ Engineering Calculation	☐ Test Reports
☐ PM Plan	☐ Schedule	☐ Permissions
☐ Product Data	☐ As Built	☐ Request for Information
☐ Pre-qualification	☐ Certificates	☐ Manuals
☐ Material Sample	☐ Job Order Completion	☒ Others (RESULT)

Purpose: ☐ For Information ☒ For Review & Approval ☐ As Requested

Subject: ATTACHED TEST RESULT OF ASPHALT BBC & BWC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24

Document Description:

SR. No.	Document No.	Job Order # / BoQ #	Document Name	Rev.	Hard Copy	Soft Copy
			ATTACHED TEST RESULT AS PER IR # 64		✓	

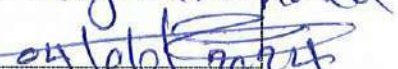
TE Review & Approval Status

- ☒ A - Approved (Work may proceed)
☐ B - Approved as Noted (Work may proceed subject to Incorporation of Comments)
☐ C - Revise and Resubmit (Work may not proceed)
☐ D - Rejected ☐ E - For Information

Discipline / GIS Review Status

QA/QC
 Name: Islam Elsherbin
 Sign: 
 Date: 05/06/2024

Project Engineer Review & Approval Status

Name: mageed mohamed
 Sign: 
 Date: 04/06/2024

Comments:

As per attached 3rd party letter and test result Report, Asphalt BBC & BWC Super pave found satisfactory.

Contractor Project Manager & Stamp

Name:

Sign:



TE Document Control Stamp

TRACTEBEL Engineering Branch

03 JUN 2024

Received by:

المستلم

TE Project Director

Name:

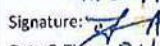
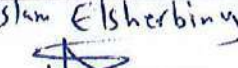
Sign:

Date:

for
 Name: Morteza Gherbi
 Sign: 
 Date: 04/06/2024

10/16

		
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Work Inspection Request					
Work Inspection Request should be submitted - at least - 24 hours prior to inspection					
Project Name:		Asphalting Donated Lands in Dahban Municipality - Part 2 16979			
Contractor:		ROAD ACCOMPLISHMENT CO.LTD.		TE Project ID:	R4-23005
Contract No.:		001/0851/00/00/4		Contractor Ref #:	JO [1 / IR [0064]
Location:		RACO PLANT.		Inspection Date:	18-May-24
Attachments				Inspection Time	08:30 AM
☐ Drawing	☐ Specification	☐ BoQ	☐ Job Order	☐ Calculation sheet	☒ Others
Attachment Ref #:					
Inspection Request Description:					
CHECK & TAKE SAMPLE FROM ASPHALT BBC & BWC FOR QUALITY TEST FOR					
MIX DESIGN APPROVAL.					
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24					
I certify that the above items have been checked and found conforming to specified requirements.					
Requested By:				Date	
(Contractor's Rep./QC Engineer)				16-May-24	
☐ Inspection to be conducted by				☐ HSE	
☐ Roads	☐ Electrical/Lighting	☐ Facilities	☒ QA/QC		
☐ Bridges/Tunnels	☐ Gardens	☐ Mechanical	☐ Survey		
TE Inspection Result					
☐ A - Approved – work may proceed ☒ B - Approved as noted – work may proceed subject to incorporation of comments ☐ P - Approved with Penalty ☐ C - Not Approved			☐ D - Other: _____ ☐ E - Rejected (NCR No. _____ Please see attached NCR ☐ NR- Work Not Ready		
TE Site Inspector Remarks:			TE Site Inspector		
			Name:		
			Signature:		
			Date & Time:		
TE Surveyor Remarks:			TE Surveyor		
			Name:		
			Signature:		
			Date & Time:		
TE QA/QC Inspector:			TE QA/QC Inspector		
Taking sample Asphalt Batch plant mix design BBE.S.P and send to 3rd Party AAM las, final approval subject to QC witness test -			Name: Tanveer Ahmad		
			Signature: 		
			Date & Time: 21/05/2024		
General Comments:					
Subject to test result Report					
TE Sr. Construction / QC Engineer:		TE Document Control Reference #		Contractor Representative:	
Name: Islam Elsherbingy				Received By:	
Signature: 				Signature: 	
Date: 21/5/2024				Date: 28-05-2024	

		
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Document Submittal

Project Name:	Asphalting Donated Lands in North Abhour Municipality - Part 2 17022		
Contractor:	ROAD ACCOMPLISHMENT LTD.CO.	TE Project ID:	R4-23006
Contract No.:	001/0601/06/00/4	Contractor Ref #:	0010
Location:	ALL AREA & DISTRICT AT PROJECT.	Date:	3-Jun-24

Please check appropriate box:

☐ Letter	☐ Technical Report	☐ Drawings
☐ Technical Submittal	☐ GIS or CAD	☐ Shop Drawing
☐ Bill of Quantities	☐ Job Order	☐ Reports
☐ Procedure or Methodology	☐ Engineering Calculation	☐ Test Reports
☐ PM Plan	☐ Schedule	☐ Permissions
☐ Product Data	☐ As Built	☐ Request for Information
☐ Pre-qualification	☐ Certificates	☐ Manuals
☐ Material Sample	☐ Job Order Completion	☒ Others (APPROVED QC LAB)

Purpose: ☐ For Information ☒ For Review & Approval ☐ As Requested

Subject: **ATTACHED TEST RESULT OF ASPHALT BBC & BVC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.**
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24

Document Description:

SR. No.	Document No.	Job Order # / BoQ #	Document Name	Rev.	Hard Copy	Soft Copy
			ATTACHED TEST RESULT AS PER IR # 13		✓	

TE Review & Approval Status

- ☒ A - Approved (Work may proceed)
☐ B - Approved as Noted (Work may proceed subject to Incorporation of Comments)
☐ C - Revise and Resubmit (Work may not proceed)
☐ D - Rejected ☐ E - For Information

Discipline / GIS Review Status

Name: *Islam Elsherbiny*
 Sign: *[Signature]*
 Date: *04/06/2024*

Project Engineer Review & Approval Status

Name: *Maged Mohamed*
 Sign: *[Signature]*
 Date: *04/06/2024*

Comments:

As per attached 3rd party letter and test result report, Asphalt BBC Super pave found satisfactory.

Contractor Project Manager & Stamp

Name:

Sign:



TE Document Control Stamp

TRACTEBEL Engineering Branch

03 JUN 2024

Received by:

المستلم

for TE Project Director

Name:

Sign:

Date:

Mortaz Ghatbi

04/06/2024

10/G

		
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Work Inspection Request			
Work Inspection Request should be submitted - at least - 24 hours prior to inspection			
Project Name:		Asphalting Donated Lands in North Abhour Municipality - Part 2 / 17022	
Contractor:		TE Project ID:	R4-23006
Contract No.:		Contractor Ref #:	JO [] / IR [0013]
Location:		Inspection Date:	18-May-24
Attachments		Inspection Time	08:30 AM
☐ Drawing	☐ Specification	☐ BoQ	☐ Job Order
		☐ Calculation sheet	☒ Others
Attachment Ref #:			
Inspection Request Description:		فروع شركة تراكتيبيل الهندسية TRACTEBEL Engineering Branch 16 MAY 2024 المستلم 16-May-24	
CHECK & TAKE SAMPLE FROM ASPHALT BBC & BWC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.			
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24			
I certify that the above items have been checked and found conforming to specified requirements.			
Requested By:		Date	
(Contractor's Rep./QC Engineer)			
☐ Inspection to be conducted by	☐ HSE		
☐ Roads	☐ Electrical/Lighting	☐ Facilities	☒ QA/QC
☐ Bridges/Tunnels	☐ Gardens	☐ Mechanical	☐ Survey
TE Inspection Result			
☐ A - Approved – work may proceed ☒ B - Approved as noted – work may proceed subject to incorporation of comments ☐ P - Approved with Penalty ☐ C - Not Approved		☐ D - Other: _____ ☐ E - Rejected (NCR No. _____) Please see attached NCR ☐ NR- Work Not Ready	
TE Site Inspector Remarks:		TE Site Inspector	
		Name:	
		Signature:	
		Date & Time:	
TE Surveyor Remarks:		TE Surveyor	
		Name:	
		Signature:	
		Date & Time:	
TE QA/QC Inspector: Taking Batch plant Asphalt BBC S.P sample, and send to 3rd Party AAM lab, final approval Subject to QC Witness test report.		TE QA/QC Inspector	
		Name: Tanveer Ahmad	
		Signature: [Signature]	
		Date & Time: 21/05/2024	
General Comments: For Mix design - Subject to Test result Report			
TE Sr. Construction / QC Engineer:		TE Document Control Reference #	
Name: Islam Elsherbiy			
Signature: [Signature]			
Date: 21/5/2024		Contractor Representative:	
		Received By:	
		Signature: [Signature]	
		Date: 28-05-2024	

		
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Document Submittal

Project Name:	Street repair project in the center and north of Jeddah, the construction of a road west of the Riyadh scheme, in the north of Jeddah		
Contractor:	ROAD ACCOMPLISHMENT LTD.CO.	TE Project ID:	R4-22002
Contract No.:	16/001/0601/05/00/4	Contractor Ref #:	0077
Location:	AL-RIYADH DIST, SEVERAL ST.	Date:	3-Jun-24

Please check appropriate box:

☐ Letter	☐ Technical Report	☐ Drawings
☐ Technical Submittal	☐ GIS or CAD	☐ Shop Drawing
☐ Bill of Quantities	☐ Job Order	☐ Reports
☐ Procedure or Methodology	☐ Engineering Calculation	☐ Test Reports
☐ PM Plan	☐ Schedule	☐ Permissions
☐ Product Data	☐ As Built	☐ Request for Information
☐ Pre-qualification	☐ Certificates	☐ Manuals
☐ Material Sample	☐ Job Order Completion	☒ Others (RESULT)

Purpose: ☐ For Information ☒ For Review & Approval ☐ As Requested

Subject: **ATTACHED TEST RESULT OF ASPHALT BBC & BWC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.**
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24

Document Description:

SR. No.	Document No.	Job Order # / BoQ #	Document Name	Rev.	Hard Copy	Soft Copy
			ATTACHED TEST RESULT AS PER IR # 353		✓	

TE Review & Approval Status

- ☒ A - Approved (Work may proceed)
☐ B - Approved as Noted (Work may proceed subject to Incorporation of Comments)
☐ C - Revise and Resubmit (Work may not proceed)
☐ D - Rejected ☐ E - For Information

Discipline / GIS Review Status

Name: *Islam Elsherbiny*
 Sign: *[Signature]*
 Date: *04/16/2024*

Project Engineer Review & Approval Status

Name: *Mohamed Farid*
 Sign: *[Signature]*
 Date: *4/16/2024*

Comments:

As per attached 3rd party lab letters and test result Report for BBC & BWC Asphalt Superpave is satisfactory.

Contractor Project Manager & Stamp

Name:

Sign:

[Signature]

TE Document Control Stamp

TRACTEBEL Engineering Branch

03 JUN 2024

Received by: *المستلم*

TE Project Director

Name:

Sign:

Date:

Name: *Abdallah Al Sakbun*
 Sign: *[Signature]*
 Date: *4/16/2024*

10/16

		
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Work Inspection Request					
Work Inspection Request should be submitted - at least - 24 hours prior to Inspection					
Project Name:	Street repair project in the center and north of Jeddah, the construction of a road west of the Riyadh scheme, in the north of Jeddah				
Contractor:	ROAD ACCOMPLISHMENT CO.LTD.	TE Project ID:	R4-22002		
Contract No.:	16/001/0601/05/00/4	Contractor Ref #:	JO [-----] / IR [0353]		
Location:	RACO PLANT.		Inspection Date:	13-May-24	
Attachments			Inspection Time	08:30 AM	
☐ Drawing ☐ Specification ☐ BoQ ☐ Job Order ☐ Calculation sheet ☒ Others					
Attachment Ref #:					
Inspection Request Description:					
CHECK & TAKE SAMPLE FROM ASPHALT BBC & BWC FOR QUALITY TEST FOR MIX DESIGN APPROVAL.					
AS PER LETTER NO, TE-KSA-CON-002-24 & TE-KSA-CON-003-24					
I certify that the above items have been checked and found conforming to specified requirements.					
Requested By:		Date			
(Contractor's Rep./QC Engineer)		12-May-24			
☐ Inspection to be conducted by			☐ HSE		
☐ Roads	☐ Electrical/Lighting	☐ Facilities	☒ QA/QC		
☐ Bridges/Tunnels	☐ Gardens	☐ Mechanical	☐ Survey		
TE Inspection Result					
☐ A - Approved – work may proceed ☒ B - Approved as noted – work may proceed subject to incorporation of comments ☐ P - Approved with Penalty ☐ C - Not Approved			☐ D - Other: _____ ☐ E - Rejected (NCR No. _____) ☐ NR- Work Not Ready		
TE Site Inspector Remarks:			TE Site Inspector		
			Name:		
			Signature:		
			Date & Time:		
TE Surveyor Remarks:			TE Surveyor		
			Name:		
			Signature:		
			Date & Time:		
TE QA/QC Inspector:			TE QA/QC Inspector		
Asphalt BBC and BWC S.P. Batch plant			Name:		
Samples has taken and send to 3rd party lab			Signature:		
AAM, final approval subject to QC witness			Date & Time:		
General Comments: material quality test report - subject to test results			20/5/2024		
TE Sr. Construction / QC Engineer:		TE Document Control Reference #		Contractor Representative:	
Name: Islam Elsherbiny				Received By:	
Signature:				Signature:	
Date: 20/5/2024				Date: 20-05-2024	

التاريخ : ٢٠٢٤/٠٥/٢٢ م

المحترمين

السادة / تريكبتل

السلام عليكم ورحمة الله وبركاته ،،،

الموضوع : تحديث اعتماد الخطة الاسفلتية لطبقة السطح لخطة السوبر بيف .

المشروع : مشاريع الانشاء.

بالإشارة الي العينات الواردة الينا بتاريخ ٢٠٢٤-٠٥-١٨ من طرفكم والخاصة
بشركة انجاز الطرق للمقاولات. المتضمنة عينات من خطة الاساس الاسفلتية سوبر
بيف (BBC).

نحيط سعادتكم علما انه قد تم اجراء اختبارات الجودة للخطة الاسفلتية ، وتبين
مطابقة العينات الواردة حسب مواصفات وزارة النقل لتصميم الخلطات الساخنة.

وتقبلوا فائق التقدير والإحترام،،،

مدير المختبر

م / باسم المغربي





التاريخ : ٢٠٢٤/٠٥/٢٢ م

المحترمين

السادة / تريكتيل

السلام عليكم ورحمة الله وبركاته ،،،

الموضوع : تحديث اعتماد الخلطة الاسفلتية لطبقة السطح لخلطة السوبر بيف .

المشروع : مشاريع الانشاء.

بالإشارة الي العينات الواردة الينا بتاريخ ٢٠٢٤-٠٥-١٨ من طرفكم والخاصة
بشركة انجاز الطرق للمقاولات. المتضمنة عينات من خلطة السطح الاسفلتية سوبر
بيف (BWC).

نحيط سعادتكم علما أنه قد تم اجراء اختبارات الجودة للخلطة الاسفلتية ، وتبين
مطابقة العينات الواردة حسب مواصفات وزارة النقل لتصميم الخلطات الساخنة.

وتقبلوا فائق التقدير والإحترام،،،

مدير المختبر





BITUMEN EXTRACTION TEST

Consultant :-	TRACTEBEL		AAM-J-230043	
Contractor :-	Road Accomplishment Co LTD		Request No.	
Contract No :-	R4-22007 / R4-22002 / R4-23005 / R4-23004 / R4-23006			
Project :-	مشاريع الانشاء		Date received	21/5/2024
Ref No. :-	IR-353 / IR-812 / IR-57 / IR-64 / IR-13		Date start	22/5/2024
Location :-	جدة		Date complet	22/5/2024
SUPERPAVE (B.B.C)				
EXTRACTION TEST		ASTM SIEVE ANALYSIS OF AGGREGATE		
Test	Results	SIEVES	RETAINED gm	RETAINED %
Wt of mix	gm	2268.0	1"	43.3
Wt of filter paper before test	gm	35.0	3/4"	341.9
Wt of filter paper after test	gm	37.0	1/2"	748.7
Wt of aggregate after test	gm	2164.0	3/8"	939.2
Total wt of aggregate	gm	2166.0	# 4	1408.8
Loss of weight	gm	104	# 8	1662
			# 16	1817.8
Bitumen by wt of mix	%	4.59	# 30	1895.7
			# 50	1945.4
			# 100	2010.4
Bitumen content of the mix	%	4.59	# 200	2042.8
Job mix Limit	%	4.60 ± 0.4	Total	2166
Checked by Lab manager مكتب المهندس عبدالكريم عبدالله المنصور AAM لفحص التربة والخرسانة والاساسات والمواد ترخيص رقم 43				





Consultant :-	TRACTEBEL				AAM-J-230043		
Contractor :-	Road Accomplishment Co LTD				Request No.		
Contract No :-	R4-22007 / R4-22002 / R4-23005 / R4-23004 / R4-23006						
Project :-	مشروع الإنشاء				Date received	21/5/2024	
Ref. NO :-	IR-353 / IR-812 / IR-57 / IR-64 / IR-13				Water test start	21/5/2024	
Location :-	جدة				Water test complete	23/5/2024	
Mix Type :-	SUPERPAVE (B.B.C)						
Superpave Gyrotory Compaction							
Bulk Specific Gravity of Compacted Specimen							
Specimen I.D.	Ndes			specs	Notes		
	1	2	Ave		1	2	Ave
a. Weight in air, dry (gm)	4960	4932			4910.0	4957.0	
b. Weight in air, SSD (gm)	4985	4958			4928.0	4960.0	
c. Weight in water, (gm)	3011	2999			2998.0	3028.0	
d. Volume, (cc)	1974.0	1959.0			1930.0	1952.0	
e. Specific Gravity (Gmb) (a/d) by Corelok	2.513	2.518	2.515		2.544	2.539	2.542
Height @ Nini	127.2	126.8			126.4	127.2	
Height @ Ndes	115.9	114.5			116.1	116.5	
Height @ Nmax					114.4	114.8	
% Grain @ Nini	87.6	87.0	87.3	89 Max			
% Grain @ Ndes	96.1	96.3	96.2	94.5 - 97.5			
% Grain @ Nmax				98 Max	97.3	97.1	97.2
Air Voids %	3.9	3.7	3.8	2.5 - 5.5			
Voids in Mineral Aggregate (VMA) %	12.8	12.6	12.7	12 - 14			
Voids Filled (VF) %	69.8	70.8	70.3	65 - 75			
Asphalt Content	4.59						
Maximum Theoretical Specific Gravity (Gmm)							
Specimen I.D.	1	2	specs	Gb =	1.026		
a. Net weight of loose mix (gm)	2412.0	2390.0		Gsb =	2.75		
b. Net weight of flask & water (gm)	8390.0	8390.0		Ps =	95.41		
c. Net weight of flask, loose mix & water	9880.0	9865.0		Gse =	2.824		
d. Maximum Theoretical Specific Gravity, Gmm (A/(A+B-C))	2.616	2.612		Pha =	0.98		
e. Average Gmm	2.614			Pbc =	3.65		
			0.9 - 1.6	DP	1.56		

Remarks : all results of sample are pass as requirment of design.

Checked by





Contractor :	Road Accomplishment Co LTD	Project No. :	AAM-J-230043
Consultant :	TRACTEBEL	Project NO	R4-22007 / R4-22002 / R4-23005 / R4-23004 / R4-23006
Project :	مشاريع الانشاء	Ref. NO	IR-353 / R-832 / IR-57 / IR-64 / IR-13
Location	جدة	Date received	21/05/2024

Bituminous (B.B.C)

EVALUATION OF STRENGTH AND MOISTURE SENSITIVITY

Property	Dry Set (Control)			Wet Set (Conditioned)		
	1	2	3	4	5	6
Diameter, mm	150	150	150	150	150	150
Thickness, mm	94.8	94.1	93.8	94.5	94.2	93.6
WL of Dry Sample in air, g	3883.6	3888.9	3879.5	3890.3	3895.6	3886.2
WL of SSD Sample in Air, g	3910.0	3913.6	3905.9	3915.0	3921.0	3910.7
WL of Sample in Water, g	2314.3	2312.9	2308.5	2312.3	2319.7	2312.2
Volume	1595.7	1600.7	1597.4	1602.7	1601.3	1598.5
Bulk Spec. Gravity	2.434	2.429	2.429	2.427	2.433	2.431
Maximum Specific Gravity (Gmm)	2.614	2.614	2.614	2.614	2.614	2.614
% Air Voids	6.9	7.1	7.1	7.1	6.9	7.0
Maximum Load, Newton	18596	18425	18405			
Dry Tensile Strength, Kpa	833	831	833			
Average	832					

Conditioned 24 Hours in 60°C Water

Thickness, mm	94.5	94.2	93.6
Maximum Load, Newton	15585	15424	15692
Wet Tensile Strength, KPA	700	695	712
Average	702		

Computation and Comparison with SUPERPAVE Criteria

Property	ITS	Tensile Strength Ratio	Meet Criteria	SUPERPAVE Criteria
Tensile Strength of dry set, Kpa	832	84.4	Yes	80% Min
Tensile Strength of wet set, Kpa	702			

Remarks : No. of Gyration = 50

Checked by

مهندس عبدالكريم عبدالله المنصور
 AAM
 لمحسنة التربة والأسفلت والمواد الإنشائية
 ترخيص رقم 43





BITUMEN EXTRACTION TEST

Consultant :-	TRACTEBEL			
Contractor :-	Road Accomplishment Co LTD		Request No.	
Contract No :-	R4-22007 / R4-22002 / R4-23005 R4-23006 / R4-2004			
Project :-	HR		Date	21/5/2024
Ref No. :-	1R-353 / 1R-812 / 1R-57 / 1R-64 / R-13			
Location :-	C.P			
SUPERPAVE (B.B.C)				
EXTRACTION TEST		ASTM SIEVE ANALYSIS OF AGGREGATE		
Test	Results	SIEVES	RETAINED gm	RETAINED %
Wt of mix	gm 2268	1"	43.3	2.0
Wt of filter paper before test	gm 35	3/4"	341.9	15.8
Wt of filter paper after test	gm 37	1/2"	748.7	34.6
Wt of aggregate after test	gm 2164	3/8"	939.2	43.4
Total wt of aggregate	gm 2166	# 4	1408.8	65.0
Loss of weight	gm 104	# 8	1662	76.7
		# 16	1817.8	83.9
Bitumen by wt of mix	% 4.59	# 30	1895.7	87.5
		# 50	1945.4	89.8
		# 100	2010.4	92.8
Bitumen content of the mix	% 4.59	# 200	2042.8	94.3
Job mix Limit	% 4.60 ± 0.4	Total		
Checked by Lab manager				

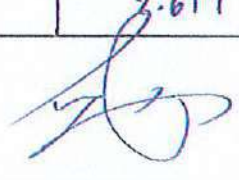
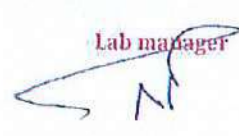




Consultant :-	TRACTERBEL		Request No.	
Contractor :-	RACO			
Contract No :-				
Project :-	R4-22007 / R4-22002 / R4-23005 R4-23004 / R4-23006		Date received	21/5/2024
Ref. NO :-			Date test start	
Location :-	Asphalt Plant		Date test compl	
Mix Type :-	SUPERPAVE (B.B.C)			

Superpave Gyrotory Compaction							
Bulk Specific Gravity of Compacted Specimen							
Specimen I.D.	Ndes			Specs	Nmax		
	1	2	Ave		1	2	Ave
a. Weight in air, dry (gm)	4960	4932			4916	4957	
b. Weight in air, SSD (gm)	4985	4958			4928	4980	
c. Weight in water, (gm)	3011	2999			2998	3028	
d. Volume, (cc)	1974	1959			1930	1952	
e. Specific Gravity (Gmb) (a/d) by Corelok	2.513	2.518	2.515		2.544	2.539	2.542
Height @ Ninl	127.2	126.8			126.4	127.2	
Height @ Ndes	115.9	114.5			116.1	116.5	
Height @ Nmax					114.4	114.8	
% Gmm @ Ninl							
% Gmm @ Ndes							
% Gmm @ Nmax							
Air Voids %							
Voids in Mineral Aggregate (VMA) %							
Voids Filled (VF) %							
Asphalt Content	4.59						

Maximum Theoretical Specific Gravity (Gmm)					
Specimen I.D.	1	2	Specs	Gb =	
a. Net weight of loose mix (gm)	2412	2390		Gsb =	
b. Net weight of flask & water (gm)	8390	8390		Ps =	
c. Net weight of flask, loose mix & water	9880	9865		Gse =	
d. Maximum Theoretical Specific Gravity, Gmm (A/(A+B-C))	2.616	2.612		Pba =	
e. Average Gmm	2.614			Pbe =	
				DP	

Checked by  Lab manager 





Contractor :	Ruco	Project No. :				
Consultant :	TRACTEBEL	Project NO				
Project :		Ref. NO				
Location	Asphalt Plant	Date received	21/5/2024			
Bituminous (BBC) EVALUATION OF STRENGTH AND MOISTURE SENSITIVITY						
Property	Dry Set (Control)			Wet Set (Conditioned)		
	1	2	3	4	5	6
Diameter, mm	150	150	150	150	150	150
Thickness, mm	94.8	94.1	93.8	94.5	94.2	93.6
Wt. of Dry Sample in air, g	3883.4	3888.9	3879.5	3890.3	3895.6	3886.2
Wt. of SSD Sample in Air, g	3910.0	3983.6	3905.9	3915	3921	3910.7
Wt. of Sample in Water, g	2314.3	2342.9	2308.5	2312.3	2319.7	2312.2
Volume	1590.7	1600.7	1597.4	1602.7	1601.8	1598.5
Bulk Spec. Gravity	2.434	2.424	2.429	2.427	2.433	2.431
Maximum Specific Gravity (Gmm)	2.614	2.614	2.614	2.614	2.614	2.614
% Air Voids	6.9	7.1	7.1	7.1	6.9	7.0
Maximum Load, Newton	18593	18425	18405			
Dry Tensile Strength, Kpa	833	831	833			
Average	832					
Conditioned 24 Hours in 60°C Water						
Thickness, mm				94.5	94.2	93.6
Maximum Load, Newton				15585	15424	15692
Wet Tensile Strength, KPA				700	695	712
Average				702		
Computation and Comparison with SUPERPAVE Criteria						
Property	ITS	Tensile Strength Ratio	Meet Criteria	SUPERPAVE Criteria		
Tensile Strength of dry set, Kpa		84.4		80 Min		
Tensile Strength of wet set, Kpa						
Remarks : No. of Gyration = 50						
Checked by		Lab manager				





BITUMEN EXTRACTION TEST

Consultant :-	TRACTEBEL					AAM-J-230043		
Contractor :-	Road Accomplishment Co LTD					Request No.		
Contract No :-	R4-22007 / R4-22002 / R4-23005 / R4-23004 / R4-23006							
Project :-	مشاريع الانشاء					Date received	21/5/2024	
Ref No. :-	IR-353 / IR-812 / IR-57 / IR-64 / IR-13					Date start	21/5/2024	
Location :-	جدة					Date complet	22/5/2024	
					SUPERPAVE (B.W.C)			
EXTRACTION TEST			ASTM SIEVE ANALYSIS OF AGGREGATE					
Test		Results	SIEVES	RETAINED gm	RETAINED %	PASSING %	JOB.MIX	SPEC.LIMITS
Wt of mix	gm	2276.0	1"	0	0.0	100.0	100	100
Wt of filter paper before test	gm	35.0	3/4"	0	0.0	100.0	100	100
Wt of filter paper after test	gm	36.9	1/2"	127.6	5.9	94.1	90 - 98	90 - 100
Wt of aggregate after test	gm	2160.0	3/8"	475.6	22.0	78.0	74 - 82	90 Max
Total wt of aggregate	gm	2161.9	# 4	979.3	45.3	54.7	50 - 60	
Loss of weight	gm	114	# 8	1351.2	62.5	37.5	32 - 42	28-58(PCS=47)
			# 16	1554.4	71.9	28.1	23 - 31	
Bitumen by wt of mix	%	5.01	# 30	1725.2	79.8	20.2	16 - 24	
			# 50	1850.6	85.6	14.4	10 - 18	
			# 100	1965.2	90.9	9.1	07 - 11	
Bitumen content of the mix	%	5.01	# 200	2051.6	94.9	5.1	3.5 - 6.5	2 - 10
Job mix Limit	%	4.90 ± 0.4	Total	2162				

Checked by





Consultant :-	TRACTEBEL				AAM-J-230043																																																																																																																																																																																		
Contractor :-	Road Accomplishment Co LTD				Request No.																																																																																																																																																																																		
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Contractor :	Road Accomplishment Co LTD	Project No. :	AAM-J-230043
Consultant :	TRACTEBEL	Project NO	R4-22007 / R4-22002 / R4-23005 / R4-23004 / R4-23006
Project :	مشروع الإنشاء	Ref. NO	IR-353 / IR-812 / IR-57 / IR-64 / IR-13
Location	جدة	Date received	21/05/2024

Bituminous (B.W.C)

EVALUATION OF STRENGTH AND MOISTURE SENSITIVITY

Property	Dry Set (Control)			Wet Set (Conditioned)		
	1	2	3	4	5	6
Diameter, mm	150	150	150	150	150	150
Thickness, mm	94.2	93.9	92.8	93.1	94.8	93.7
Wt. of Dry Sample in air, g	3846.2	3854.5	3839.1	3855.9	3861.2	3849.8
Wt. of SSD Sample in Air, g	3873.6	3880.2	3861.5	3877.6	3886.6	3875.5
Wt. of Sample in Water, g	2266.8	2269.9	2264.3	2265.0	2278.0	2268.2
Volume	1606.8	1610.3	1597.2	1612.6	1608.6	1607.3
Bulk Spec. Gravity	2.394	2.394	2.404	2.391	2.400	2.395
Maximum Specific Gravity (Gmm)	2.578	2.578	2.578	2.578	2.578	2.578
% Air Voids	7.1	7.2	6.8	7.2	6.9	7.1
Maximum Load, Newton	17415	17624	17585			
Dry Tensile Strength, Kpa	785	797	804			
Average	795					

Conditioned 24 Hours in 60°C Water

Thickness, mm	93.1	94.8	93.7
Maximum Load, Newton	14512	14321	14124
Wet Tensile Strength, KPA	662	641	640
Average	647		

Computation and Comparison with SUPERPAVE Criteria

Property	ITS	Tensile Strength Ratio	Meet Criteria	SUPERPAVE Criteria
Tensile Strength of dry set, Kpa	795	81.4	Yes	80% Min
Tensile Strength of wet set, Kpa	647			

Remarks: No. of Gyration = 50

Checked by

مكتب المهندس
lab manager
عبدالكريم عبدالله المنصور
AAM
لخدمات التربة والخرسانة والأسفلت والمواد
ترخيص رقم 43





BITUMEN EXTRACTION TEST

Consultant :-	TRACTEBEL		AAM-J-230043	
Contractor :-	Raco		Request No.	
Contract No :-	R4-22007 / R4-22002 / R4-2305			
Project :-	R4-23004 / R4-23006 مشاريع الإسفلت		Date received	2/15/2024
Ref No. :-	IR-353 / IR-812 / IR-57 / IR-13		Date start	
Location :-	IR-69		Date complet	
SUPERPAVE (D.W.C)				
EXTRACTION TEST		ASTM SIEVE ANALYSIS OF AGGREGATE		
Test	Results	SIEVES	RETAINED gm	RETAINED %
Wt of mix	gm 2276	1"		
Wt of filter paper before test	gm 35	3/4"	0	0
Wt of filter paper after test	gm 36.9	1/2"	127.6	5.9
Wt of aggregate after test	gm 2160	3/8"	475.6	22.0
Total wt of aggregate	gm 2161.9	# 4	979.3	45.3
Loss of weight	gm 114	# 8	1351.2	62.5
		# 16	1554.4	71.9
Bitumen by wt of mix	% 5.01	# 30	1725.2	79.8
		# 50	1850.6	85.6
		# 100	1965.2	90.6
Bitumen content of the mix	% 5.01	# 200	2051.6	94.9
Job mix Limit	% 4.90 ± 0.4	Total		
Checked by		Lab manager		





Consultant :-	TRACTEBEL			Request No.	
Contractor :-	Raco				
Contract No :-	R4-22007 / R4-22002 / IR-23005 / R4-23004 R4+23006				
Project :-	سكة حديد الأرباب			Date received	21/5/2024
Ref. NO :-	IR-353 / IR-812 / IR-57 / IR-64 / IR-13			Date test start	
Location :-	Caf			Date test comple	
Mix Type :-	SUPERPAVE (B.W.C)				
Superpave Gyrotory Compaction Bulk Specific Gravity of Compacted Specimen					
	Ndes			specs	Nmax
Specimen I.D.	1	2	Ave		
a. Weight in air, dry (gm)	4784	4762			4770 4756
b. Weight in air, SSD (gm)	4802	4783			4788 4772
c. Weight in water, (gm)	2862	2854			2879 2872
d. Volume, (cc)	1940	1929			1909 1900
e. Specific Gravity (Gmb) {a/d} by Corelok	2.466	2.469	2.467		2.499 2.503 2.501
Height @ Nini	123.8	124			122.9 123.3
Height @ Ndes	114.1	113.9			113.1 114.1
Height @ Nmax					111.6 112.7
% Gmm @ Nini					
% Gmm @ Ndes					
% Gmm @ Nmax					
Air Voids %					
Voids in Mineral Aggregate (VMA) %					
Voids Filled (VF) %					
Asphalt Content	5.01				
Maximum Theoretical Specific Gravity (Gmm)					
Specimen I.D.	1	2	specs	Gb =	
a. Net weight of loose mix (gm)	2383	2412		Gsb =	
b. Net weight of flask & water (gm)	8390	8390		Ps =	
c. Net weight of flask, loose mix & water	9850	9865		Gse =	
d. Maximum Theoretical Specific Gravity, Gmm (A/(A+B-C))	2.582	2.574		Pba =	
e. Average Gmm	2.578			Pbe =	
				DP	
Checked by Lab manager					





Contractor :	Raco	Project No. :				
Consultant :	TRACTEBEL	Project NO				
Project :		Ref. NO				
Location	Asphalt Plant	Date received	21/5/2024			
Bituminous (BWC) EVALUATION OF STRENGTH AND MOISTURE SENSITIVITY						
Property	Dry Set (Control)			Wet Set (Conditioned)		
	1	2	3	4	5	6
Diameter, mm	150	150	150	150	150	150
Thickness, mm	94.2	93.9	92.8	93.1	94.8	93.7
Wt. of Dry Sample in air, g	3846.2	3854.5	3839.1	3855.9	3861.2	3849.8
Wt. of SSD Sample in Air, g	3873.6	3880.2	3861.5	3877.6	3886.6	3849.8
Wt. of Sample in Water, g	2266.8	2264.9	2254.3	2265.0	2278.0	2268.2
Volume	1606.8	1610.3	1597.2	1612.6	1608.6	1607.3
Bulk Spec. Gravity	2.394	2.394	2.404	2.391	2.400	2.395
Maximum Specific Gravity (Gmm)	2.578					
% Air Voids	7.1	7.2	6.8	7.2	6.9	7.1
Maximum Load, Newton	17415	17624	17585			
Dry Tensile Strength, Kpa	785	797	804			
Average	795					
Conditioned 24 Hours in 60°C Water						
Thickness, mm				93.1	94.8	93.7
Maximum Load, Newton				14512	14321	14124
Wet Tensile Strength, KPA				662	641	640
Average				647		
Computation and Comparison with SUPERPAVE Criteria						
Property	ITS	Tensile Strength Ratio	Meet Criteria	SUPERPAVE Criteria		
Tensile Strength of dry set, Kpa		81.4		80 Min		
Tensile Strength of wet set, Kpa						
Remarks:	No. of Gyration = 50					
Checked by				Lab manager		



Date : 07 May 2024 : 28 شوال 1445 هـ : التاريخ

Ref. No. : TE-KSA-CON-002-24 : رقم المرجع

JM Ref. : 4500254547 : رقم الأمانة

Projects : 1. Asphalt, pavement, and street lighting for residential streets in North Jeddah - Project ID: 16871. : 1- سفلتة وارصفة وإنارة شوارع وطرق احياء شمال جدة - 16871. : اسم المشاريع

Title : 2. Asphalt for plot layouts within the jurisdiction of Tayyibah Sub-Municipality (Phase Two) - Project ID: 16980. : 2- سفلتة مخططات المنح في نطاق بلدية طيبة الفرعية (المرحلة الثانية) - 16980.

3. Asphalt for plot layouts within the jurisdiction of North Obhur Sub-Municipality (Phase Two) - Project ID: 17022. : 3- سفلتة مخططات المنح في نطاق بلدية أبهر الشمالية الفرعية (المرحلة الثانية) - 17022.

4. Asphalt for plot layouts within the jurisdiction of Dhahban Sub-Municipality (Phase Two) - Project ID: 16979. : 4- سفلتة مخططات المنح في نطاق بلدية ذهبان الفرعية (المرحلة الثانية) - 16979.

5. Street repair project in central and northern Jeddah and construction of a road west of Riyadh neighborhood in northern Jeddah. : 5- مشروع اصلاح الشوارع وسط وشمال محافظة جدة وإنشاء طريق غرب مخطط الرياض شمال محافظة جدة .

Attention : Roads Accomplishment Co. for Contracting : شركة إنجاز الطرق للمقاولات. : عناية

P O box : 43462 : صندوق بريد

C R : 4030129949 : سجل تجارى : 4030129949

Copy to : Eng. Saleh Al-Bukhari Respected Director General of Bridges and Tunnels, Jeddah Municipality. : المهندس/ صالح البخاري محترم مدير عام الجسور والانفاق أمانة محافظة جدة : نسخة الى

Copy to : Eng. Ahmed bin Saad, Respected Director of Road Implementation Department, Jeddah Municipality. : المهندس/ أحمد بن سعد محترم مدير إدارة تنفيذ الطرق أمانة محافظة جدة : نسخة الى

Subject : Regarding the update of Approval for the Asphalt Mix (BBC SP) : بخصوص تحديث اعتماد الخلطة اسفلتية (BBC SP). : الموضوع

After Greetings,

تحية طيبة وبعد ،،،،

Referring to the General Administration of Roads and Bridges in Jeddah Municipality letter number 4500254547, on 23/04/2024. Based on your registered letter with Jeddah Municipality number 3310/A/2024 on 23/04/2024. Regarding the update of the Asphalt Mix (BBC SP) for the mentioned projects. The Director General of Roads and Bridges requesting to review and approve the mentioned Asphalt Mix after examining and reviewing it according to the specific requirements of the specifications and conditions for the aforementioned contracts.

بالإشارة إلى خطاب الإدارة العامة للطرق والجسور بأمانة محافظة جدة برقم 4500254547 وتاريخ 1445/10/14 هـ والمبينة على خطابكم المسجل لدى أمانة جدة برقم 3310/أ/2024 بتاريخ 1445/10/14 هـ بشأن تحديث اعتماد الخلطة الاسفلتية (BBC SP) للمشاريع المذكورة أعلاه ، وطلب سعادة مدير عام الطرق والجسور الاطلاع واعتماد الخلطة الاسفلتية المذكورة أعلاه بعد دراستها ومراجعتها وفق المتطلبات الخاصة لكراسة المواصفات واشترائط للعقود المشار اليها أعلاه.

Therefore, we kindly request your compliance with the technical requirements stated in the specifications and conditions for the above-mentioned projects, and to submit the design mix and the plan for tests and inspection, and to conduct all necessary tests through coordination with an accredited laboratory to take samples of the Superpave Asphalt base Mix (BBC) in coordination

عليه، نأمل منكم التقيد بما ورد بالشروط الفنية في كراسة الشروط والمواصفات بعقود المشاريع أعلاه وتقديم الخلطة التصميمية وخطه الاختبارات والفحص وعمل كافة الاختبارات اللازمة من خلال مراجعة مختبر معتمد لأخذ عينات من خلطة الأساس الإسفلتية بنظام السوير بيغ (BBC) بالتنسيق مع شركة تراكتبل الهندسية استشاري الاشراف على مشاريع الانشاء بأمانة محافظة جدة.

with Tractable Engineering Company, the consultant supervising construction projects at the Jeddah Municipality.

Yours faithfully,

وتفضلوا بقبول فائق الاحترام والتقدير،



مدير البرنامج

شركة تراكتبل الهندسية

عبدالله الصبيان

الرقم: ٤٥٠٠٢٥٤٥٤٧

النسخة : أصل المعاملة

التاريخ : ١٤٤٥/١٠/١٤ هـ

المرفقات :

الموضوع: بخصوص تحديث اعتماد الخطة الاسفلتية (BBC SP)

المحترمين

السادة استشاري الأمانة شركة تراكتبل للاستشارات الهندسية

السلام عليكم ورحمة الله وبركاته،،،

إشارة إلى طلب شركة انجاز الطرق للمقاولات المحدودة رقم ٢٠٢٤/١/٣٣١٠ بتاريخ ٢٠٢٤/٠٤/٢٢ م والمقيدة لدينا برقم ٤٥٠٠٢٥٤٥٤٧ وتاريخ ١٤٤٥/١٠/١٤ هـ بخصوص تحديث اعتماد خطة الأساس الاسفلتي بنظام السوبربيف (BBC SP) لعدد من المشاريع على النحو التالي :

رقم	رقم العقد	اسم العقد
١	١٩/٥/٣٧/٠٠١/٠٦٠١/٠٦/٠٠/٤	سفلتة وارصفة وانارة شوارع وطرق احياء شمال جدة - ١٧٨٦١
٢	٠٠١/٠٨٥١/٠٠/٠٠/٤	سفلتة مخططات المنح في نطاق بلدية طيبة الفرعية (المرحلة الثانية) ١٦٩٨٠
٣	٣٢/٠٠١/٠٨٥١/٠٠/٠٠/٤	سفلتة مخططات المنح نطاق بلدية أبحر الشمالية الفرعية مرحلة ثانية ١٧٠٢٢
٤	٠٠١/٠٨٥١/٠٠/٠٠/٤	سفلتة مخططات المنح نطاق بلدية ذهبان الفرعية (المرحلة الثانية) ١٦٩٧٩_
٥	١٦/٠٠١/٠٦٠١/٠٥/٠٠/٤	مشروع اصالح الشوارع وسط وشمال محافظة جدة انشاء طريق غرب مخطط الرياض شمال محافظة جدة

لذا نأمل من سعادتك الماطلاع واعتماد الخطة الاسفلتية بعد دراستها ومراجعتها وفق المتطلبات الخاصة لكراسة المواصفات والاشتراطات للعقود المشار اليها أعلاه .

وتقبلوا التحية والتقدير،،،

مدير عام الطرق والجسور

م. صالح بن أحمد البخاري

١٤٤٥/١٠/١٤ هـ

رقم: ٤٥٠٠٢٥٤٥٤٧

تاريخ: ١٤٤٦/٠٢/٢٢ هـ

نسخة: أهل المعاملة



بيانات الطلب الإلكتروني

رقم الطلب	٣٠١٧٨٠	التاريخ	الاثنين ١٤٤٦/٠٢/٢٢ هـ
الموضوع	بخصوص تحديث اعتماد الخلطة الاسفلتية (BBC SP)		
مقدم الطلب	طلعت محمدنور يحي حبيب الله (مفوض عن) شركة انجاز الطرق للمقاولات المحدوده		
رقم الجوال	٠٥٠٠٠٩٧٨٤٧		

ملاحظات	بخصوص تحديث اعتماد الخلطة الاسفلتية (BBC SP)
---------	--

تنويه : هذا النموذج تم تكوينه بشكل تلقائي عن طريق نظام الاتصالات الإدارية بناء على مدخلات المواطن من خلال بوابة الخدمات الالكترونية ويتحمل المواطن كامل المسؤولية القانونية لمحتوى هذا الخطاب

Date : 07 May 2024 : 28 شوال 1445 هـ : التاريخ

Ref. No. : TE-KSA-CON-002-24 : رقم المرجع

JM Ref. : 4500254547 : رقم الأمانة

Projects : 1. Asphalt, pavement, and street lighting for residential streets in North Jeddah - Project ID: 16871. : 1- سفلتة وارصفة وإنارة شوارع وطرق احياء شمال جدة - 16871. : اسم المشاريع

Title : 2. Asphalt for plot layouts within the jurisdiction of Tayyibah Sub-Municipality (Phase Two) - Project ID: 16980. : 2- سفلتة مخططات المنح في نطاق بلدية طيبة الفرعية (المرحلة الثانية) - 16980.

3. Asphalt for plot layouts within the jurisdiction of North Obhur Sub-Municipality (Phase Two) - Project ID: 17022. : 3- سفلتة مخططات المنح في نطاق بلدية أبهر الشمالية الفرعية (المرحلة الثانية) - 17022.

4. Asphalt for plot layouts within the jurisdiction of Dhahban Sub-Municipality (Phase Two) - Project ID: 16979. : 4- سفلتة مخططات المنح في نطاق بلدية ذهبان الفرعية (المرحلة الثانية) - 16979.

5. Street repair project in central and northern Jeddah and construction of a road west of Riyadh neighborhood in northern Jeddah. : 5- مشروع اصلاح الشوارع وسط وشمال محافظة جدة وإنشاء طريق غرب مخطط الرياض شمال محافظة جدة .

Attention : Roads Accomplishment Co. for Contracting : شركة إنجاز الطرق للمقاولات. : عناية

P O box : 43462 : صندوق بريد

C R : 4030129949 : سجل تجارى : 4030129949

Copy to : Eng. Saleh Al-Bukhari Respected Director General of Bridges and Tunnels, Jeddah Municipality. : المهندس/ صالح البخاري محترم مدير عام الجسور والانفاق أمانة محافظة جدة : نسخة الى

Copy to : Eng. Ahmed bin Saad, Respected Director of Road Implementation Department, Jeddah Municipality. : المهندس/ أحمد بن سعد محترم مدير إدارة تنفيذ الطرق أمانة محافظة جدة : نسخة الى

Subject : Regarding the update of Approval for the Asphalt Mix (BBC SP) : بخصوص تحديث اعتماد الخلطة اسفلتية (BBC SP). : الموضوع

After Greetings,

تحية طيبة وبعد ،،،

Referring to the General Administration of Roads and Bridges in Jeddah Municipality letter number 4500254547, on 23/04/2024. Based on your registered letter with Jeddah Municipality number 3310/A/2024 on 23/04/2024. Regarding the update of the Asphalt Mix (BBC SP) for the mentioned projects. The Director General of Roads and Bridges requesting to review and approve the mentioned Asphalt Mix after examining and reviewing it according to the specific requirements of the specifications and conditions for the aforementioned contracts.

بالإشارة إلى خطاب الإدارة العامة للطرق والجسور بأمانة محافظة جدة برقم 4500254547 وتاريخ 1445/10/14 هـ والمبينة على خطابكم المسجل لدى أمانة جدة برقم 3310/أ/2024 بتاريخ 1445/10/14 هـ بشأن تحديث اعتماد الخلطة الاسفلتية (BBC SP) للمشاريع المذكورة أعلاه ، وطلب سعادة مدير عام الطرق والجسور الاطلاع واعتماد الخلطة الاسفلتية المذكورة أعلاه بعد دراستها ومراجعتها وفق المتطلبات الخاصة لكراسة المواصفات واشترائط للعقود المشار اليها أعلاه.

Therefore, we kindly request your compliance with the technical requirements stated in the specifications and conditions for the above-mentioned projects, and to submit the design mix and the plan for tests and inspection, and to conduct all necessary tests through coordination with an accredited laboratory to take samples of the Superpave Asphalt base Mix (BBC) in coordination

عليه، نأمل منكم التقيد بما ورد بالشروط الفنية في كراسة الشروط والمواصفات بعقود المشاريع أعلاه وتقديم الخلطة التصميمية وخطة الاختبارات والفحص وعمل كافة الاختبارات اللازمة من خلال مراجعة مختبر معتمد لأخذ عينات من خلطة الأساس الإسفلتية بنظام السوير بيغ (BBC) بالتنسيق مع شركة تراكتبل الهندسية استشاري الاشراف على مشاريع الانشاء بأمانة محافظة جدة.

with Tractable Engineering Company, the consultant supervising construction projects at the Jeddah Municipality.

Yours faithfully,

وتفضلوا بقبول فائق الاحترام والتقدير،



مدير البرنامج
شركة تراكتابل الهندسية
عبدالله الصبيان

الرقم: ٤٥٠٠٢٥٤٥٤٧

النسخة : أصل المعاملة

التاريخ : ١٤٤٥/١٠/١٤ هـ

المرفقات :

الموضوع: بخصوص تحديث اعتماد الخطة الاسفلتية (BBC SP)

المحترمين

السادة استشاري الأمانة شركة تراكتبل للاستشارات الهندسية

السلام عليكم ورحمة الله وبركاته،،،

إشارة إلى طلب شركة انجاز الطرق للمقاولات المحدودة رقم ٢٠٢٤/١/٣٣١٠ بتاريخ ٢٠٢٤/٠٤/٢٢ م والمقيدة لدينا برقم ٤٥٠٠٢٥٤٥٤٧ وتاريخ ١٤٤٥/١٠/١٤ هـ بخصوص تحديث اعتماد خطة الأساس الاسفلتي بنظام السوبربيف (BBC SP) لعدد من المشاريع على النحو التالي :

رقم	رقم العقد	اسم العقد
١	١٩/٥/٣٧/٠٠١/٠٦٠١/٠٦/٠٠/٤	سفلتة وارصفة وانارة شوارع وطرق احياء شمال جدة - ١٧٨٦١
٢	٠٠١/٠٨٥١/٠٠/٠٠/٤	سفلتة مخططات المنح في نطاق بلدية طيبة الفرعية (المرحلة الثانية) ١٦٩٨٠
٣	٣٢/٠٠١/٠٨٥١/٠٠/٠٠/٤	سفلتة مخططات المنح نطاق بلدية أبحر الشمالية الفرعية مرحلة ثانية ١٧٠٢٢
٤	٠٠١/٠٨٥١/٠٠/٠٠/٤	سفلتة مخططات المنح نطاق بلدية ذهبان الفرعية (المرحلة الثانية) ١٦٩٧٩_
٥	١٦/٠٠١/٠٦٠١/٠٥/٠٠/٤	مشروع اصالح الشوارع وسط وشمال محافظة جدة انشاء طريق غرب مخطط الرياض شمال محافظة جدة

لذا نأمل من سعادتك الماطلوع واعتماد الخطة الاسفلتية بعد دراستها ومراجعتها وفق المتطلبات الخاصة لكراسة المواصفات والاشتراطات للعقود المشار اليها أعلاه .

وتقبلوا التحية والتقدير،،،

مدير عام الطرق والجسور

م. صالح بن أحمد البخاري

١٤٤٥/١٠/١٤ هـ

٢٠٢٤ / ١ / ٣٣١٠

٢٠٢٤ / ٠٤ / ٢٢ م

الموضوع/ بخصوص تحديث اعتماد الخلطة الاسفلتية (BBC SP)

سعادة / مدير عام الطرق والجسور
صورة مع التحية للاستشاري الأمانة شركة تراكتبل للاستشارات الهندسية
الموقر
المحترمون
تحية طيبة ،،،

بالإشارة الى الموضوع أعلاه والى مشاريعنا مع مقام امانة محافظة جدة الخاصة بالأعمال الأسفلتية بخصوص تحديث اعتماد الخلطة الأساس الاسفلتي بنظام السوبريف (BBC SP) للمشاريع الاتية: -

رقم	رقم العقد	اسم العقد
1	19/5/37/001/0601/06/00/4	سفلة وارصفة وانارة شوارع وطرق احياء شمال جدة - ١٦٨٧١
2	001/0851/00/00/4	سفلة مخططات المنح في نطاق بلدية طيبة الفرعية (المرحلة الثانية) ١٦٩٨٠
3	32/001/0851/00/00/4	سفلة مخططات المنح نطاق بلدية أبحر الشمالية الفرعية مرحلة ثانية ١٧٠٢٢
4	001/0851/00/00/4	سفلة مخططات المنح نطاق بلدية ذهبان الفرعية (المرحلة الثانية) ١٦٩٧٩
5	16/001/0601/05/00/04	مشروع اصلاح الشوارع وسط وشمال محافظة جدة انشاء طريق غرب مخطط الرياض شمال محافظة جدة

عليه نأمل من سعادتكم التوجيه لمن يلزم بمراجعة الملفات المرفقة واعتماد تحديث الخلطة الأساس الاسفلتي بنظام السوبريف (BBC SP).

ولكم جزيل الشكر والتقدير ،،،

مدير المشاريع
م / محمد الحمزي



الهوية الوطنية

• رقم النسخة



المملكة العربية السعودية

وزارة الداخلية

طلعت بن محمدنور بن يحيى حبيب الله

HABIBULLAH, TALAT MOHAMMEDNAOAR Y



No: 1054123466

الرقم : ١٠٥٤١٢٣٤٦٦

DOB: 23/04/1967

تاريخ الميلاد : ١٣٨٧/٠١/١٣

DOE: 13/05/2038

تاريخ الانتهاء : ١٤٦٠/٠٤/٠٩



1054123466

مكان الميلاد : مكة المكرمة

طلب إضافة مفوض عن مؤسسة أو شركة

التاريخ: ١٧ / ١٠ / ١٤٤١ هـ

الموافق: ٠٩ / ٠٦ / ٢٠٢٠ م

الموقرين

السادة / أمانة محافظة جدة

السلام عليكم ورحمة الله وبركاته

نأمل منكم تفويض السيد طلعت محمد نور يحي حبيب الله هوية رقم 1054123466 للاستخدام الحسابات الإلكترونية لدى أمانة محافظة جدة والخاصة بقائمة الشركات/المؤسسات المسجلة أدناه، مع العلم أنه تم تسجيلها في خدمة عملاء الأمانة، ونحن نؤكد بأن المفوض أعلاه هو الشخص المسؤول عن حساباتنا لديكم وإدارة جميع معاملتنا الإلكترونية، ونتحمل مسؤولية جميع نتائج هذا التفويض وما يترتب عليه من تبعات قانونية، وللإدارة المختصة بالأمانة الحق في سحب أو إلغاء هذا التفويض متى ارتأت ضرورة لذلك دون أدنى مسؤولية على الأمانة.

ونفيدكم بأننا قد اطلعنا على جميع الشروط والأحكام الواردة ضمن لوائح استخدام الحسابات الإلكترونية المتوفرة على موقع أمانة جدة الإلكتروني ونوافق عليها.

م	اسم الشركة/المؤسسة	رقم السجل التجاري
١	شركة إنجاز الطرق للمقاولات المحدودة	4030148791
٢		

أقر الموقع أدناه أن لدي كامل الصلاحية بالتوقيع على جميع السجلات التجارية المذكورة بالجدول أعلاه في الغرفة التجارية، وأن أحمل كامل التبعات القانونية المترتبة في حال مخالفة ذلك.



المسؤول: مناحي بن جاد البقمي

الوظيفة: نائب المدير العام

التوقيع: [Signature]

الختم: [Stamp]

شركة إنجاز الطرق للمقاولات المحدودة

جدة - حي الصفا - بريد واصل وحدة رقم ١٢ - رقم المبنى ٤٠٨١ - ص.ب ٢٣٤٦٢ - الرمز البريدي ٢٣٤٥٥ - الرقم الإضافي ٧٧١١ - جوال: ٥٥٥٦٥٤٠٣٧ - هاتف: ٢٦٥٧٧٨٨ - فاكس: ٢٦٥٧٧٩٩ - ٠١٢ - س.ت: ٤٠٣٠١٤٨٧٩١ - غ.ت: ٩٨٠٠٥ - الرقم الضريبي: ٣١٠١١٩٢١٩١٠٠٠٠٣

يجب طباعة هذا الخطاب على [Stamp]

Certificate No :HOM/CCJ/13429

Date: December 17, 2023

M/s Enjaz Al Turk Company

Road Accomplishment Ltd . For Contracting - RACO

Jeddah - K.S.A

ISO / IEC 17025 -2017 & TUV - ISO 9001 : 2015

CERTIFICATE OF CALIBRATION

CERTIFIES THAT THE INSTRUMENT LISTED BELOW HAS BEEN TESTED / CALIBRATED USING STANDARDS WHOSE ACCURACY'S ARE TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY USA. WITHIN THE LIMITATION OF THESE LABORATORIES CALIBRATION SERVICES, OR HAVE BEEN DERIVED BY THE RATIO OF SELF-CALIBRATION TECHNIQUES. INFORMATION ON THE CALIBRATION PROCESS AND ITS RESULTS IS GIVEN IN THE CONTINUATION AS PER ATTACHMENT OF THIS DOCUMENT.

DESCRIPTION	:	ASPHALT PLANT
PLANT	:	AMP 2500 C
SCALE TYPE	:	ELECTRONIC - METTLER TOLEDO IND 320 L
DETAILS	:	AGGRIGATE SCALE BITUMEN SCALE FILLER SCALE
PLANT LOCATION	:	BARIMAN - AREA
DATE OF CALIBRATION	:	DECEMBER 14, 2023
NEXT CALIBRATION DUE	:	JUNE 14, 2024

CERTIFICATE IS VALID FOR SIX (6) MONTHS FROM DATE OF CALIBRATION.

For HOUSE OF MEASUREMENT



TEST RESULT OF CALIBRATION

Company
Address
Location

Enjaz Al Turk Company / Road Accomplishment Ltd for Contracting RACO
Jeddaah - Bariman K.S.A
Bairam Certificate No:HOM/CC/J/13429

Equipment Type
Plant
Capacity

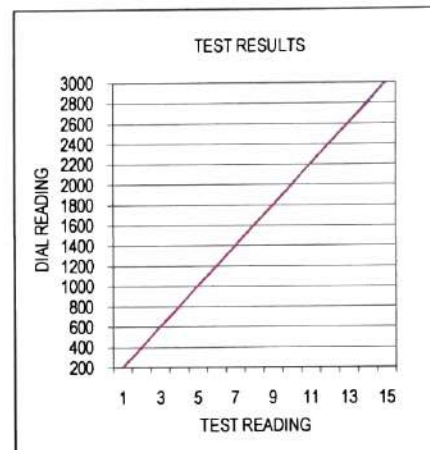
Aggregate Scale
AMP 2500 C
4000 Kg x 1 Kg

ScaleType
S.No
Date of Cal

Mettler IND320 L
B 511707046
14/12/2023

Indicator Readings	Test-1 Kg	Test-2 Kg	Test-3 Kg	Mean Kg	Error. %
--------------------	-----------	-----------	-----------	---------	----------

200	200	200	200	200	0
400	400	400	400	400	0
603	603	603	603	603	0
802	802	802	802	802	0
1005	1005	1005	1005	1005	0
1206	1206	1206	1206	1206	0
1403	1403	1403	1403	1403	0
1605	1605	1605	1605	1605	0
1800	1800	1800	1800	1800	0
2003	2003	2003	2003	2003	0
2204	2204	2204	2204	2204	0
2408	2409	2409	2408	2409	0.03
2603	2605	2604	2603	2604	0.04
2802	2804	2803	2802	2803	0.04
3006	3009	3007	3006	3007	0.04



ABOVE INSTRUMENT HAS BEEN TESTED AND CALIBRATED BY USING SASO STANDARD ABOVE READINGS HAVE BEEN FOUND WITH IN TOLERANCE LIMIT. RESULTS ARE INTERPRETED AND COMPLAANCE WITH ASTM E4-93 STANDARD.

BASIS OF TEST
EQUIPMENT CONDITION
ADDITIONAL COMMENTS

WORKING WITH IN TOLERANCE LIMIT	PASS
EQUIPMENT WAS ADJUSTED	YES
EQUIPMENT REQUIRED REPAIRING	NO

THIS CERTIFICATE IS VALID FOR SIX (6) MONTHS FROM THE DATE OF CALIBRATION.

For HOUSE OF MEASUREMENT

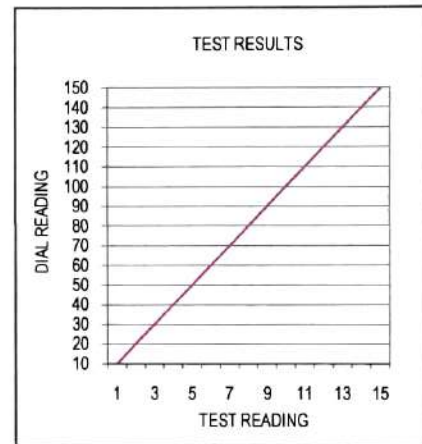


CALIBRATED BY

TEST RESULT OF CALIBRATION

Company	Enjaz Al Turk Company / Road Accomplishment Ltd for Contracting RACO		
Address	Jeddaah - Bariman K.S.A		
Location	Bairam		
	Certificate No: HOM/CCJ/13429		
Equipment Type	Bitumen Scale	ScaleType	Mettler IND320 L
Plant	AMP 2500 C	S.No	B 511707045
Capacity	400 Kg x 0.1 Kg	Date of Cal	14/12/2023

Indicator Readings	Test-1 Kg	Test-2 Kg	Test-3 Kg	Mean Kg	Error. %
10	10	10	10	10	0
20	20	20	20	20	0
30	30	30	30	30	0
40	40	40	40	40	0
50	50	50	50	50	0
60	60	60	60	60	0
70	70	70	70	70	0
80	80	80	80	80	0
90	90	90	90	90	0
100	100	100	100	100	0
110	110	110	110	110	0
120	120	120	120	120	0
130	130	130	130	130	0
140	139.9	140.0	140.0	140.0	0.02
150	149.9	150.0	150.0	150.0	0.02



ABOVE INSTRUMENT HAS BEEN TESTED AND CALIBRATED BY USING SASO STANDARD ABOVE READINGS HAVE BEEN FOUND WITH IN TOLERANCE LIMIT. RESULTS ARE INTERPRETED AND COMPLIANCE WITH ASTM E4-93 STANDARD.

BASIS OF TEST		
EQUIPMENT CONDITION	WORKING WITH IN TOLERANCE LIMIT	PASS
	EQUIPMENT WAS ADJUSTED	YES
ADDITIONAL COMMENTS	EQUIPMENT REQUIRED REPAIRING	NO

THIS CERTIFICATE IS VALID FOR SIX (6) MONTHS FROM THE DATE OF CALIBRATION.


For HOUSE OF MEASUREMENT




CALIBRATED BY

TEST RESULT OF CALIBRATION

Company
Address
Location

Enjaz Al Turk Company / Road Accomplishment Ltd for Contracting RACO
Jeddaah - Bariman K.S.A
Bairam
Certificate No: HOM/CCJ/13429

Equipment Type
Plant
Capacity

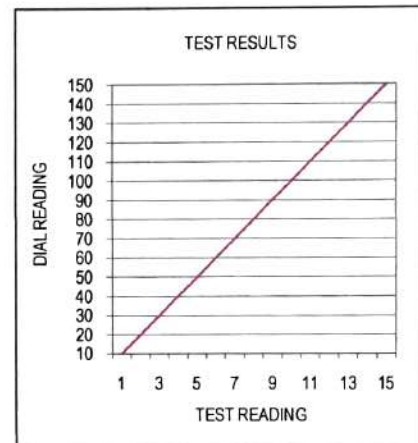
Filler Scale
AMP 2500 C
400 Kg x 0.1 Kg

Flow Meter
S.No
Date of Cal

Mettler IND320 L
B 511707044
14/12/2023

Indicator Readings	Test-1 Kg	Test-2 Kg	Test-3 Kg	Mean Kg	Error. %
--------------------	-----------	-----------	-----------	---------	----------

10	10	10	10	10	0
20	20	20	20	20	0
30	30	30	30	30	0
40	40	40	40	40	0
50	50	50	50	50	0
60	60	60	60	60	0
70	70	70	70	70	0
80	80	80	80	80	0
90	90	90	90	90	0
100	100	100	100	100	0
110	110	110	110	110	0
120	120	120	120	120	0
130	130	130	130	130	0
140	139.9	139.9	140.0	139.9	0.05
150	149.9	149.9	150.0	149.9	0.04

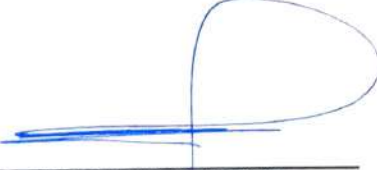


ABOVE INSTRUMENT HAS BEEN TESTED AND CALIBRATED BY USING SASO STANDARD ABOVE READINGS HAVE BEEN FOUND WITH IN TOLERANCE LIMIT. RESULTS ARE INTERPRETED AND COMPLAINT WITH ASTM E4-93 STANDARD.

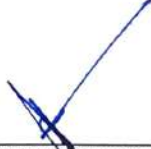
BASIS OF TEST
EQUIPMENT CONDITION
ADDITIONAL COMMENTS

WORKING WITH IN TOLERANCE LIMIT	PASS
EQUIPMENT WAS ADJUSTED	YES
EQUIPMENT REQUIRED REPAIRING	NO

THIS CERTIFICATE IS VALID FOR SIX (6) MONTHS FROM THE DATE OF CALIBRATION.


For HOUSE OF MEASUREMENT




CALIBRATED BY

المملكة العربية السعودية
وزارة الشؤون البلدية والقروية



*Kingdom Of Saudi Arabia
Ministry of Municipal & Rural Affairs*

Contractor :- Road Accomplishment CO.

Superpave Mix Design
Bitumenous Base Coarse

شركة إنجاز الطرق للمقاولات



Superpave Mix Design Report

Page 1 of 13

Mix Design Reference No.	25R2C4y	Date	
Project Information and Basic Design Parameters			
Project	مشاريع امالة محافظة جدة		
Contractor	شركة انجاز الطرق للمقاولات		
Consultant	Louis Berger & Zuhair Fayed Partnership		
Project Location	Jeddah		
Mix Type	Bituminous Base Course		
Type of Facility	Highways		
Layer Thickness, mm	70.0	Nominal Maximum Size, mm	25.0
Thickness of the pavement above the layer, mm	50.0	Position of the layer for the design purposes (Either ≤ 100 mm or > 100 mm)	< 100
Design Traffic Class Designation (or ESALs)	Heavy (10-30 million ESAL's)	New Design	Yes
Submitted By		Approved By	
Name	Eng / Hosam Ramdan		
Designation	QA/QC @ RACO.		
Date			
Signature			



Hot-Mix Asphalt Criteria

Summary of the Basic Design Parameters of the Mix Design

Project	مشاريع امانة محافظة جدة
Design Traffic Class Designation (or ESALs)	Heavy (10-30 million ESAL)
Position of the layer for the design purposes (Either <100 mm or > 100 mm)	< 100
Nominal Maximum Size, mm	25.0

Summary of the Design Parameters for the HMA as Required by SUPERPAVE Mix Design System

Item	Property		Requirement	Level
SUPERPAVE Criteria for the Aggregate Consensus Properties	Coarse Aggregate Angularity, %	One Fractured Face	95.0	Min
		Two or More Fractured Faces	90.0	Min
	Fine Aggregate Angularity, %		45.0	Min
	Flat & Elongated Particle, %		10.0	Max
	Sand Equivalent, %		45.0	Min
SUPERPAVE Gyratory Compactive Effort (SGCE)	No. of Gyration	N _{initial}	8	n/a
		N _{design}	100	n/a
		N _{max}	160	n/a
SUPERPAVE Criteria for the Volumetric Mixture Design	Required Density, % G _{mm}	N _{initial}	89.0	Max
		N _{design}	96.0	n/a
		N _{max}	98.0	Max
	Voids in the Mineral Aggregate, % (VMA)		12.0	Min
			14.0	Max
	Voids Filled with Asphalt, % (VFA)		65.0	Min
			75.0	Max
	Dust to Binder Ratio (DP)		0.90	Min
			1.60	Max
	Dry Indirect Tensile Strength , kPa		Report	Min
			1400.0	Max
	Retained Indirect Tensile Strength for the Wet Set Compared to the Dry Set, %		80%	Min
Required Binder PG for the Project Based on Environmental Considerations Only		High Temperature	70	Min
		Low Temperature	-10	Min

Asphalt Binder Data

Binder Grade Selection

Selected Asphalt Binder PG From Temperature Zoning Map of the Kingdom of Saudi Arabia		PG 70-10
PG Adjustment for Traffic Level and Speed	Click here to view the grade adjustment table	1
Final Recommended ABPG for the Project	High Temperature	76
	Low Temperature	-10

Polymer Modification Requirements

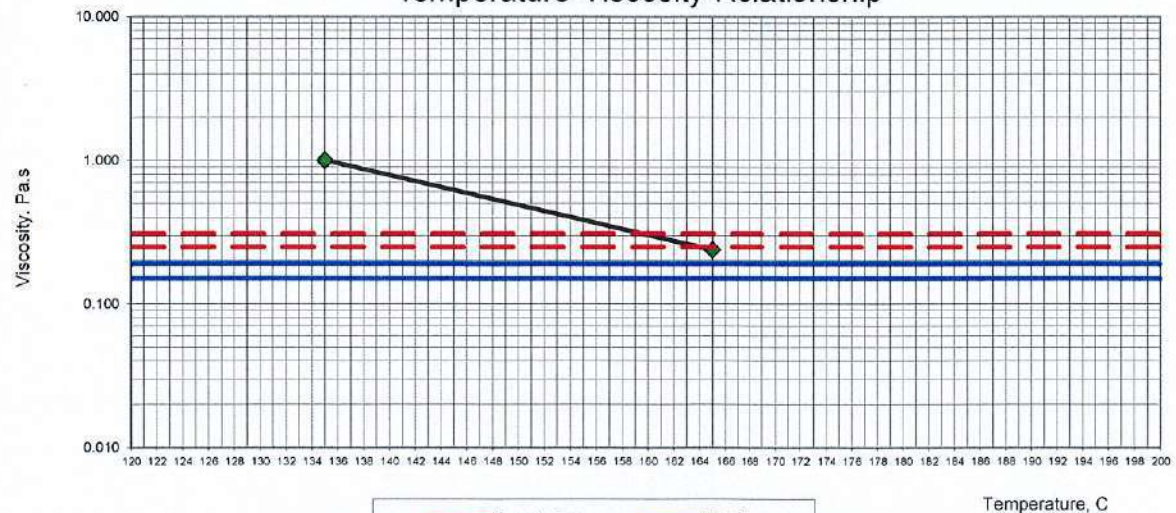
Asphalt Binder Source	60/70 Pen Grade Asphalt + 8% Crumb Rubber			
ABPG from Source	High Temperature	76	Low Temperature	-10

If the Color code of the High or Low temperature binder PG from source is RED, then modification is needed

Binder Test Results

Binder Description		PG 76-10		
Test		Test Method	Test Result	SUPERPAVE Criteria
Flash Point, C		AASHTO T 48	320+	230 C minimum
Specific Gravity, G_b		AASHTO T 228	1.026	n/a
Rotational Viscosity @	135	AASHTO T 316	1.000	3.0 Pa.s maximum
Rotational Viscosity @	165	AASHTO T 316	0.237	n/a
Select the Mixing and Compaction Temperature From the Temperature-Viscosity Relationship		Mixing temp., C	169 - 174	n/a
		Compaction temp., C	159 - 164	n/a

Temperature-Viscosity Relationship



Aggregate Data

Summary of the Physical Properties of the Individual Aggregates

Property	Test Method	Aggregate (samples from the hot bins)				
		Agg. # 1	Agg. # 2	Agg. # 3	Agg. # 4	Agg. # 5 (Mineral Filler)
Bulk Specific Gravity, G_{sb}	AASHTO T85 and T84	2.780	2.759	2.735	2.723	2.769
Apparent Specific Gravity, G_{sa}		2.854	2.849	2.835	2.845	2.769
Water Absorption, P_{bw} %	AASHTO T85 and T84	0.932	1.138	1.294	1.575	
Coarse Aggregate Angularity, % min.	AASHTO TP61 (ASTM D 5821)	1+ Faces	98.30	98.30		
		2+ Faces	97.00	97.00		
Fine Aggregate Angularity, % min.	AASHTO T 304			46.28	46.28	46.28
Flat & Elongated Particles, % max	ASTM D 4791	4.30	4.30			
Sand Equivalent, % min	AASHTO T 176			55.00	55.00	55.00
Soundness	AASHTO T104	3.26/4.85				
Deleterious Materials	AASHTO T112	0.12				
Toughness (LA Abrasion)	AASHTO T95	24.00				

Summary of the Aggregate Gradations

Sieve Size		Percentage Passing				
		Samples From the Hot Bins				
mm	in	Agg. # 1	Agg. # 2	Agg. # 3	Agg. # 4	Agg. # 5
50.0	2.0	100.0	100.0	100.0	100.0	100.00
37.5	1.5	100.0	100.0	100.0	100.0	100.00
25.0	1.0	100.0	100.0	100.0	100.0	100.00
19.0	3/4	46.9	100.0	100.0	100.0	100.00
12.5	1/2	1.0	69.2	100.0	100.0	100.00
9.5	3/8	0.9	20.5	98.5	100.0	100.00
4.75	No.4	0.4	0.1	15.8	97.2	100.00
2.36	No 8	0.1	0.0	0.1	65.4	100.00
1.18	No 16	0.0	0.0	0.1	41.8	100.00
0.60	No 30	0.0	0.0	0.1	27.5	100.00
0.30	No 50	0.0	0.0	0.0	20.5	97.00
0.15	No 100	0.0	0.0	0.0	12.1	93.00



Selection of DAS

Aggregate Gradation

Sieve Size raised to 0.45 power	Sieve Size		Percentage Passing				
			Samples From the Hot Bins				
	mm	in	Agg. # 1	Agg. # 2	Agg. # 3	Agg. # 4	Agg. # 5
5.81	50.0	2	100.0	100.0	100.0	100.0	100.0
5.11	37.5	1.5	100.0	100.0	100.0	100.0	100.0
4.26	25	1	100.0	100.0	100.0	100.0	100.0
3.76	19.0	3/4	46.9	100.0	100.0	100.0	100.0
3.12	12.5	1/2	1.0	69.2	100.0	100.0	100.0
2.75	9.5	3/8	0.9	20.5	98.5	100.0	100.0
2.02	4.75	No.4	0.4	0.1	15.8	97.2	100.0
1.47	2.36	No 8	0.1	0.0	0.1	65.4	100.0
1.08	1.18	No 16	0.0	0.0	0.1	41.8	100.0
0.79	0.60	No 30	0.0	0.0	0.1	27.5	100.0
0.58	0.30	No 50	0.0	0.0	0.0	20.5	97.0
0.43	0.15	No 100	0.0	0.0	0.0	12.1	93.0
0.31	0.075	No. 200	0.0	0.0	0.0	6.5	89.0

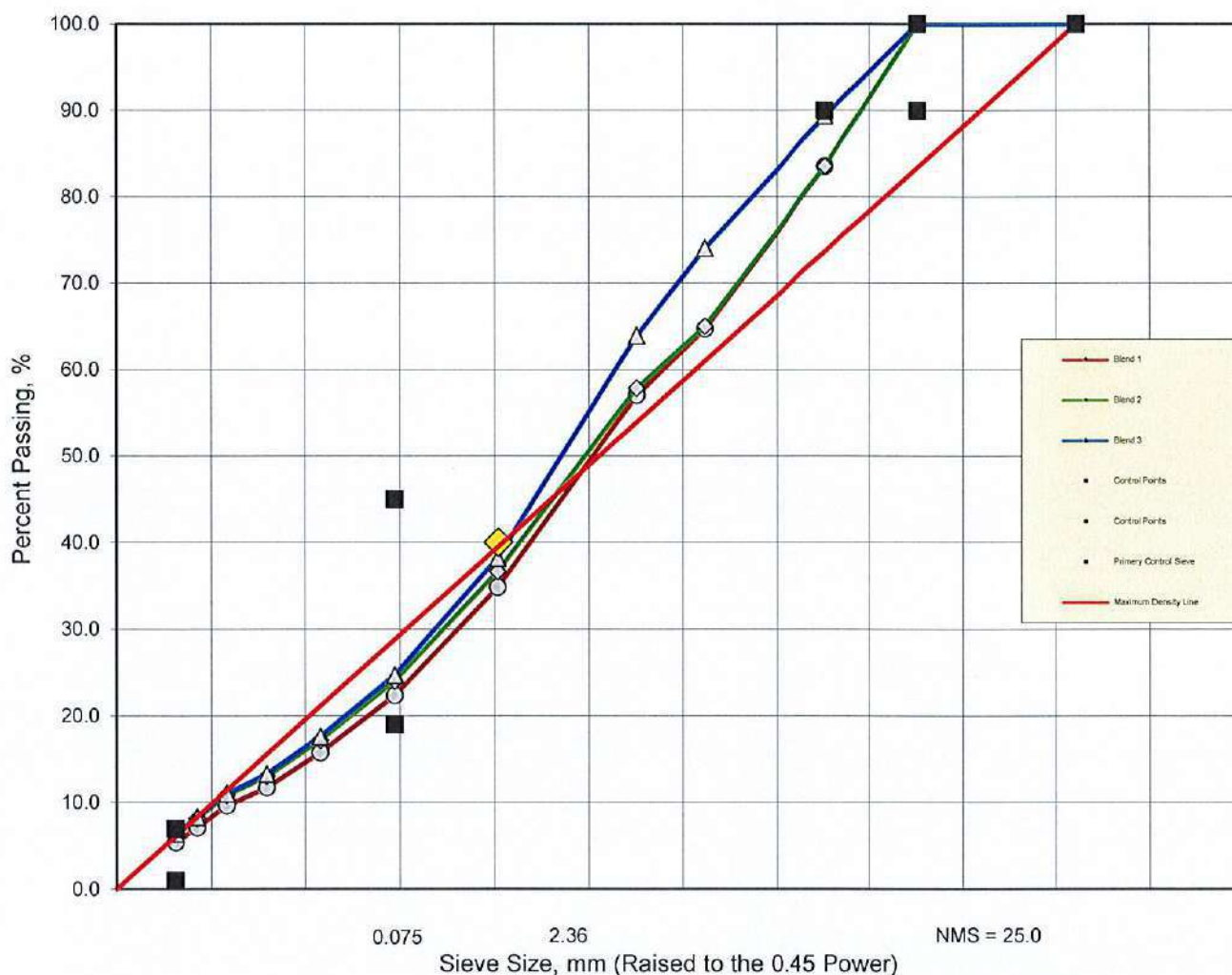
Suggested Blending Percentages

Blend #	Total	Agg. # 1	Agg. # 2	Agg. # 3	Agg. # 4	Agg. # 5
Blend 1	100.0	31.0	15.0	22.0	28.0	4.0
Blend 2	100.0	31.0	14.0	21.0	29.0	5.0
Blend 3	100.0	20.0	20.0	25.0	30.0	5.0

Selection of DAS

Sieve Size raised to 0.45 power	Sieve Size in mm	SUPERPAVE Criteria, % Passing			% Passing				
		Control Points			The Primary Control Sieve	Blend 1	Blend 2	Blend 3	Remarks
		Min	Max						
5.81	50.0			The PCS was introduced in the new AASHTO M323 "Superpave Volumetric Mix Design Specifications", 2005	100.0	100.0	100.0		
5.11	37.5	100.0			100.0	100.0	100.0		
4.26	25.0	90.0	100.0		100.0	100.0	100.0		
3.76	19.0		90.0	It is defined as the sieve size that classifies the gradation between course and fine. PCS is specified for each NMS.	83.5	83.5	89.4		
3.12	12.5				64.7	65.0	74.0		
2.75	9.5				57.0	57.8	63.9		
2.02	4.75				34.8	36.6	38.2		
1.47	2.36	19.0	45.0	For 25.0 mm NMS the PCS is 4.75 mm and the % passing at this sieve is 40.0%. If the gradation line passes above the PCS then the gradation is classified as fine otherwise it is classified as coarse.	22.4	24.0	24.7		
1.08	1.18				15.7	17.2	17.6		
0.79	0.60				11.7	13.0	13.3		
0.58	0.30				9.6	10.8	11.0		
0.43	0.15				7.1	8.2	8.3		
0.31	0.075	1.0	7.0		5.4	6.3	6.4		
Based on the PCS Criteria, the gradation of each blend is classified as					Coarse	Coarse	Coarse		

Gradation Curve for the Suggested Blends Compared to SUPERPAVE Gradation Criteria - 25.0 mm Nominal Maximum Size



Verification of the Design NMS for the Proposed Blends

Sieve Size	Blend 1	Blend 2	Blend 3	Remarks
37.5				
25.0	NMS	NMS	NMS	
19.0				
12.5				
9.5				



Estimated Combined Properties of the Blends and Comparison with Superpave Criteria

Property	SUPERPAVE Criteria		Blend 1	Blend 2	Blend 3	Remarks
Bulk Specific Gravity	G_{sb}	n/a	2.750	2.750	2.747	
Apparent Specific Gravity	G_{sa}	n/a	2.843	2.842	2.841	
Water Absorption, %	Pbw	n/a	1.235	1.239	1.274	
Coarse Aggregate Angularity, % min.	1 + Faces	95	98.3	98.3	98.3	
	Meet the Criteria ?		Yes	Yes	Yes	
	2+ Faces	90	97.0	97.0	97.0	
	Meet the Criteria ?		Yes	Yes	Yes	
Fine Aggregate Angularity, % min.	FAA	45	46.0	46.0	46.0	
	Meet the Criteria ?		Yes	Yes	Yes	
Flat & Elongated, % max	F&E	10	4.3	4.3	4.3	
	Meet the Criteria ?		Yes	Yes	Yes	
Sand Equivalent, % min	SE	45	55.0	55.0	55.0	
	Meet the Criteria ?		Yes	Yes	Yes	

Estimation of the Initial Trial Asphalt Binder % (P_{bi}) for the Trial Blends

Computed Value of		Blend 1	Blend 2	Blend 3	Remarks
Absorption Constant		0.8	0.8	0.8	
Aggregate Effective Specific Gravity, G_{se}		2.825	2.824	2.822	
Aggregate Bulk Specific Gravity, G_{sb}		2.750	2.750	2.747	
Volume of the Absorbed Binder, V_{ba}		0.0226	0.0224	0.0231	
Volume of Effective Binder, V_{be}		0.0816	0.0816	0.0816	
Percent of the initial trial asphalt binder, P_{bi}	Calculated P_{bi} Value Based on AASHTO R-35 and SP-2	4.3	4.3	4.3	
	Input the selected P_{bi} Value either from the calculation or from experience	4.5	4.5	4.5	



Summary of the Densification Data for the Trial Blends

	Blend 1		Blend 2		Blend 3	
Percent of the initial trial asphalt binder, P_{bi}	4.5		4.5		4.5	
Property	Sample No.					
	1	2	1	2	1	2
Height of samples at N_{ini}	123.7	124.6	122.4	122.5	124.2	123.6
Average Height of samples at N_{ini}	124.2		122.5		123.9	
Height of samples at N_{des}	111.8	112.5	112.1	111.6	112.1	112.8
Average Height of samples at N_{des}	112.2		111.9		112.5	
Weight of Sample (Oven Dry), g	4802.1	4803.5	4798.9	4801.7	4797.1	4796.2
Weight of Sample (Saturated Surface Dry), g	4822.5	4825.1	4817.4	4820.4	4813.4	4811.1
Weight of Sample in Water, g	2889.8	2896.5	2891.1	2897.5	2873.6	2862.5
Bulk Specific Gravity (G_{mb}) @ N_{des}	2.485	2.491	2.491	2.497	2.473	2.461
Average Bulk Specific Gravity (G_{mb}) @ N_{des}	2.488		2.494		2.467	
Wight of the Loose Mix, g	2201.1	2203.4	2202.6	2201.8	2203.9	2204.5
Weight of Flask With Water, g	9654.7	9654.7	9654.7	9654.7	9654.7	9654.7
Weight of Flask with Water and Loose Mix, g	11006.2	11003.8	11009.4	11004.1	10999.4	11002.4
Maximum Specific Gravity (G_{mm})	2.591	2.579	2.598	2.583	2.565	2.573
Average Maximum Specific Gravity (G_{mm})	2.585		2.590		2.569	

Determination of Volumetric Properties of the Trial Blends

Computed Value	Blend 1	Blend 2	Blend 3
% G_{mm} @ N_{ini}	86.9	88.0	87.2
% G_{mm} @ N_{des}	96.2	96.3	96.0
% Air Voids	3.8	3.7	4.0
% VMA_{ini}	13.6	13.4	14.2
Percent of the initial trial asphalt binder, P_{bi}	4.5	4.5	4.5
Calculated G_{se} from G_{mm}	2.784	2.791	2.765
% Asphalt Absorption, P_{ba}	0.455	0.542	0.246

Determination of Volumetric Properties for the Trial Blends at 4.0% Air Voids

Estimated Values	Blend 1	Blend 2	Blend 3
Estimated asphalt @ 4.0% air voids ($P_{b_{estimated}}$)	4.4	4.4	4.5
% G_{mm} @ N_{ini}	86.7	87.7	87.1
% G_{mm} @ N_{des}	96.0	96.0	96.0
% Air Voids	4.0	4.0	4.0
Voidage Constant (C)	0.1	0.1	0.1
% $VMA_{estimated}$	13.6	13.4	14.2
% $VFA_{estimated}$	70.68	70.20	71.88
Effective asphalt binder content (P_{be})	4.0	3.9	4.3
Dust Proportion (DP ratio)	1.36	1.64	1.51

Comparison of Volumetric Properties of the Trial Blends with Criteria

Computed Value	Blend 1	Blend 2	Blend 3
% G_{mm} @ N_{ini}	OK	OK	OK
% G_{mm} @ N_{des}	OK	OK	OK
% Air Voids	OK	OK	OK
% $VMA_{estimated}$	OK	OK	VMA High
% $VFA_{estimated}$	OK	OK	OK
Dust Proportion (DP ratio)	OK	Not OK	OK

Selection of the Design Asphalt Content (DAC)

The Selected Blend from the DAS Step is	Blend 1
Input the Following Properties of the Selected Blend	
Bulk Specific Gravity of the Selected Blend, G_{sb}	2.750
Estimated asphalt to achieve 4.0% air voids ($P_{b,estimated}$)	4.5
Percentage Passing 0.075 Sieve (NO 200) of the Selected Blend	5.4

Densification Data for the DAC

DAC Suggsted Levels	4.0		4.5		5.0		5.5	
Property	Sample No.							
	1	2	1	2	1	2	1	2
Height of samples at N_{ini}	124.3	125.1	124.3	124.1	124.5	124.2	124.4	123.1
Average Height of samples at N_{ini}	124.7		124.2		124.4		123.8	
Height of samples at N_{des}	112.8	112.5	112.2	112.6	111.5	112.1	110.3	111.6
Average Height of samples at N_{des}	112.7		112.4		111.8		111.0	
Determination of G_{mb} @ N_{des}								
Weight of Sample (Oven Dry), g	4796.2	4801.7	4799.5	4802.6	4803.8	4797.1	4801.6	4800.3
Weight of Sample (Saturated Surface Dry), g	4819.3	4825.8	4819.6	4824.1	4818.6	4812.3	4811.8	4809.6
Weight of Sample in Water, g	2870.4	2873.3	2888.1	2888.9	2889.7	2891.5	2893.3	2890.3
Bulk Specific Gravity (G_{mb}) @ N_{des}	2.461	2.459	2.485	2.482	2.490	2.497	2.503	2.501
Average Bulk Specific Gravity (G_{mb}) @ N_{des}	2.460		2.483		2.494		2.502	
Determination of G_{mm}								
Wight of the Loose Mix, g	2198.1	2201.4	2196.8	2200.5	2199.3	2203.2	2201.8	2197.6
Weight of Flask With Water, g	8542.6	8542.6	8542.6	8542.6	8542.6	8542.6	8542.6	8542.6
Weight of Flask with Water and Loose Mix, g	9900.0	9901.8	9893.1	9892.0	9887.2	9887.8	9881.0	9884.0
Maximum Specific Gravity (G_{mm})	2.615	2.614	2.596	2.585	2.573	2.568	2.550	2.567
Average Maximum Specific Gravity (G_{mm})	2.614		2.591		2.571		2.558	



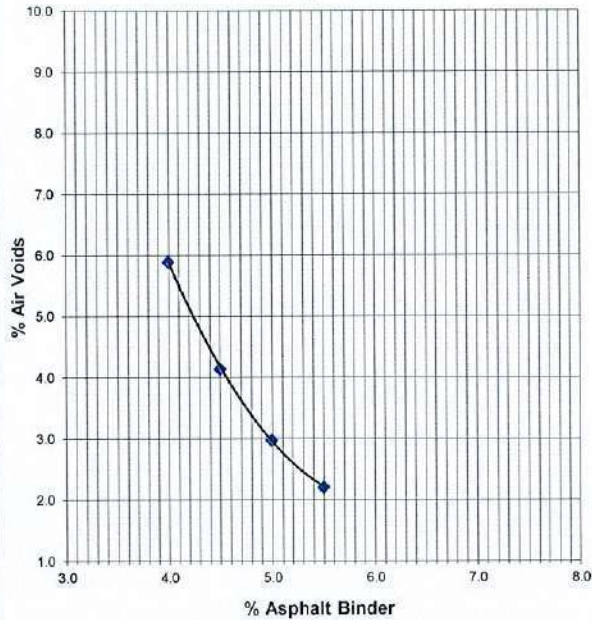
Determination of Volumetric Properties for the DAC

Computed Value	4.0	4.5	5.0	5.5
% G_{mm} @ N_{ini}	85.0	86.7	87.2	87.7
% G_{mm} @ N_{des}	94.1	95.9	97.0	97.8
% Air Voids	5.9	4.1	3.0	2.2
% VMA	14.1	13.8	13.8	14.0
% VFA	58.2	69.9	78.5	84.3
Calculated G_{se} from G_{mm}	2.794	2.791	2.792	2.802
% Asphalt Absorption, P_{ba}	0.59	0.55	0.56	0.69
Effective asphalt binder content (P_{be})	3.4	4.0	4.5	4.8
Dust Proportion (DP ratio)	1.57	1.36	1.21	1.11

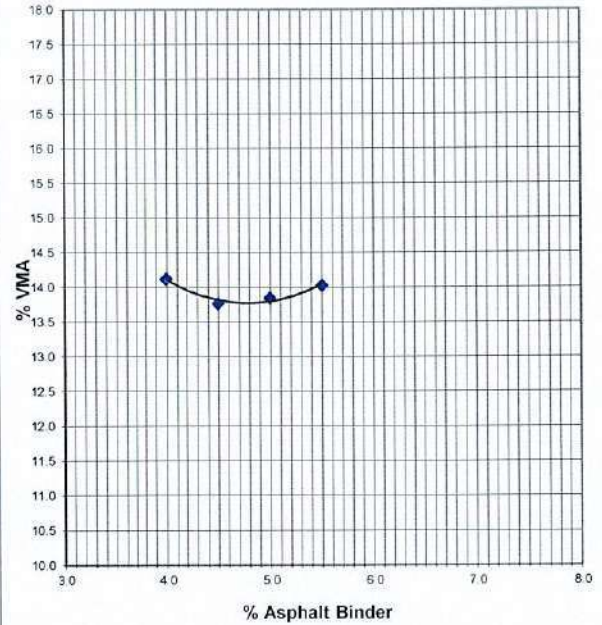
Determination of the DAC and Verification of Volumetric Requirements of the Mix Compared to Superpave Criteria

Property		Value	Meet the Criteria ?	SUPERPAVE Criteria
DAC (Selected % Asphalt Binder Content at 4.0 air voids)		4.6	n/a	n/a
Calculated G_{se} from G_{mm}		2.795	n/a	n/a
Effective asphalt binder content (P_{be}), %		4.0	n/a	n/a
% G_{mm} @ N_{ini}		86.8	Yes	89
% G_{mm} @ N_{des}		96.0	Yes	96
% Air Voids		4.0	Yes	4
% VMA		13.7	Yes	12
				14
% VFA	Minimum	71.0	Yes	65
	Maximum			75
Dust Proportion (DP ratio)	Minimum	1.345	Yes	0.9
	Maximum			AdEC ePAVB362006

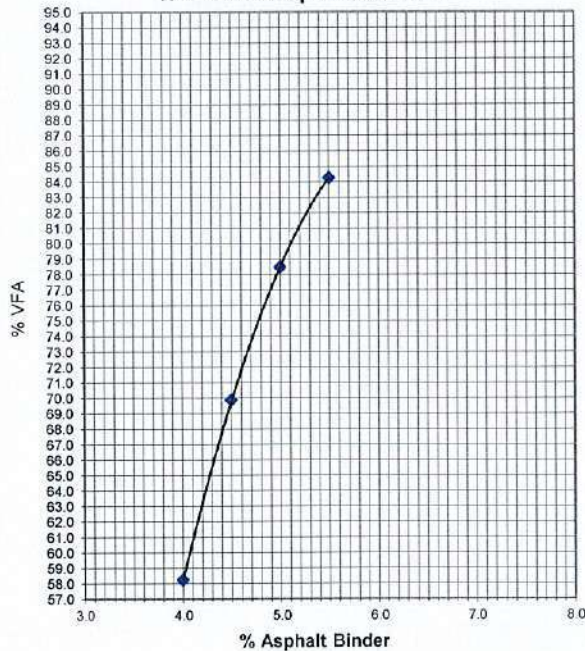
Air Voids vs. Asphalt Content



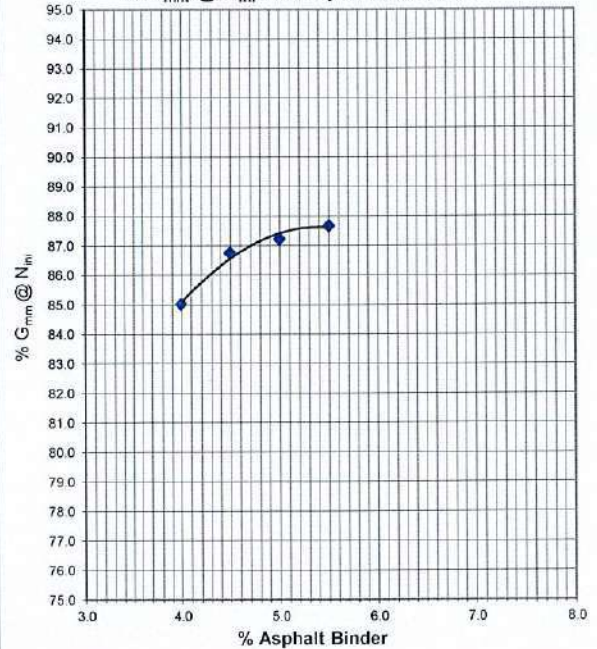
% VMA vs. Asphalt Content



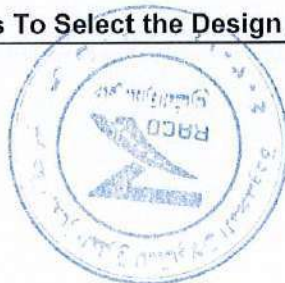
% VFA vs. Asphalt Content



% G_{mm} @ N_{ini} vs. Asphalt Content



Mix Design Curves To Select the Design Asphalt Content (DAC)



Mix Design Verification				
(1) Verification of the HMA Volumetric Properties at N_{des}				
Property			Sample #	
			1	2
Height of samples at N_{ini}			127.8	126.9
Average Height of samples at N_{ini}			127.4	
Height of samples at N_{des}			114.8	113.5
Average Height of samples at N_{des}			114.2	
Determination of G_{mb} @ N_{des}				
Weight of Sample (Oven Dry), g			4845.1	4839.7
Weight of Sample (Saturated Surface Dry), g			4861.3	4858.6
Weight of Sample in Water, g			2909.0	2912.5
Bulk Specific Gravity (G_{mb}) at N_{des}			2.482	2.487
Average Bulk Specific Gravity (G_{mb}) at N_{des}			2.484	
Determination of G_{mm}				
Wight of the Loose Mix, g			2197.1	2195.8
Weight of Flask With Water, g			9654.7	9654.7
Weight of Flask with Water and Loose Mix, g			11003.6	11006.3
Maximum Specific Gravity (G_{mm})			2.590	2.601
Average Maximum Specific Gravity (G_{mm})			2.596	
Property	Value	meet the Criteria ?	Superpave Criteria	
Design Asphalt Content, %	4.57	n/a	n/a	
Bulk Specific Gravity, G_{sb}	2.75	n/a	n/a	
Effective Specific Gravity, G_{se}	2.801	n/a	n/a	
% G_{mm} @ N_{ini}	85.8	Yes	89.0	
% G_{mm} @ N_{des}	95.7	Yes	96.0	
% Air Voids	4.3	Yes	4.0	
% VMA	13.8	Yes	12.0	
			14.0	
% VFA	68.9	Yes	65.0	
			75.0	
Asphalt Absorption, (P_{ba})	0.678	n/a	n/a	
% Passing 0.075 mm Sieve	5.40	n/a	n/a	
Effective asphalt binder content (P_{be})	3.9	n/a	n/a	
Dust Proportion (DP ratio)	1.38	Yes	0.90	
			1.60	
(2) Verification of the HMA Volumetric Properties at N_{max}				
Property			Sample #	
			1	2
Determination of G_{mb} @ N_{max}				
Weight of Sample (Oven Dry), g			4851.7	4847.4
Weight of Sample (Saturated Surface Dry), g			4862.8	4858.2
Weight of Sample in Water, g			2923.3	2914.8
Bulk Specific Gravity (G_{mb}) at N_{max}			2.502	2.494
Average Bulk Specific Gravity (G_{mb}) at N_{max}			2.498	
Property	Average	% G_{mm} @ N_{max}	Meet the Criteria ?	Superpave Criteria, Max.
Bulk Specific Gravity, G_{mb} @ N_{max}	2.498	96.2	Yes	98.0
Maximum Specific Gravity, G_{mm}	2.596			

Evaluation of Strength and Moisture Sensitivity AASHTO T283

Note: The evaluation of the moisture sensitivity of the designed Hot-Mix Asphalt is performed according to SUPERPAVE Mix Design Guidelines Approved and Issued by the Ministry of Transport.

Required SGCE (No of Gyration) to Achieve 7.0 Air Voids (%Gmm = 93.0%) =

46

Original Samples

Property	Sample					
	Dry Set (control)			Wet-Set (Conditioned)		
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Diameter, mm	150.00	150.00	150.00	150.00	150.00	150.00
Thickness, mm	92.8	91.1	92.9	92.4	93.8	91.3
Weight of Dry Sample in Air, g	3903.1	3893.5	3897.6	3902.2	3906.7	3896.1
Weight of SSD Sample in Air, g	3938.3	3933.9	3937.5	3936.2	3940.1	3934.2
Weight of Sample in Water, g	2316.9	2317.5	2318.0	2318.7	2315.0	2320.0
Volume	1621.4	1616.4	1619.5	1617.5	1625.1	1614.2
Bulk Specific Gravity	2.407	2.409	2.407	2.412	2.404	2.414
Maximum Specific Gravity (G_{mm})	2.596	2.596	2.596	2.596	2.596	2.596
% Air Voids	7.3	7.2	7.3	7.1	7.4	7.0
Maximum load, Newton	18523.0	17848.0	18053.0	Remarks:		
DRY Tensile Strength, kPa	847	831	825			
Average DRY Tensile Strength, kPa	834					

Conditioned 24 Hours in 60 °C Water

Thickness, mm	92.8	94.3	91.6
Maximum Load, Newton	15784.0	15826.0	15748.0
Wet Tensile Strength, kPa	722	712	730

Computation and Comparison with SUPERPAVE Criteria

Property	ITS	Tensile Strength Ratio (TSR)	Meet the Criteria ?	SUPERPAVE Criteria, % Max.
Tensile Strength of the Dry set, kPa	834	86.4%	Yes	80.0%
Tensile Strength of the Wet set, kPa	721			



Project مشروع امانة محافظة جدة
Description B.B.C. Mix design
Sampled At Plant Trial

1) Bituminous Content

TEST NO.	1	
(a) WEIGHT OF SAMPLE BEFOR TEST	2198.3	
(b) WEIGHT OF SAMPLE AFTER TEST	2095.6	
(c) WT.OF FILTER PAPER BEFORE TEST	41.2	
(d) WT.OF FILTER PAPER AFTER TEST	44.5	
(e) INCREASE IN WT. OF FILTER PAPER (d - c)	3.3	
(f) TOTAL WEIGHT OF AGGREGATE (b + e)	2098.9	
(g) WEIGHT OF BITUMINOUS MATERIAL (a - f)	99.4	
(h) ASPHALT CONTENT (g / a) * 100	4.52	
AVERAGE ASPHALT CONTENT = 4.6 (+ _ 4)	4.52%	

2) Sieve Analysis

SIEVE SIZE	WT. RETAINED	CUM.WT. RETAINED	CUM.WT. PASSING	PERCENT PASSING	J M F	CONTROL POINTS
2"						
1 1/2"					100	
1"	0.0	0.0	2098.9	100.0%	96 - 100	90-100
3/4"	285.6	285.6	1813.3	86.4%	80 - 88	90 MAX
1/2"	449.6	735.2	1363.7	65.0%	60 - 69	
3/8"	114.9	850.1	1248.8	59.5%	53 - 61	
NO.4	453.1	1303.2	795.7	37.9%	30 - 40	pcs=40%
NO.8	318.8	1622.0	476.9	22.7%	19 - 26	19-45
NO.16	118.3	1740.3	358.6	17.1%	12 - 20	
NO.30	65.4	1805.7	293.2	14.0%	8 - 16	
NO.50	53.1	1858.8	240.1	11.4%	6 - 14	
NO.100	63.9	1922.7	176.2	8.4%	5 - 10	
NO.200	67.9	1990.6	108.3	5.16%	4 - 7	1-7
PAN	5.0					
WASH	103.3					
TOTAL	2098.9					

TOTAL WEIGHT OF AGGREGATE
WASH OVEN DRY WEIGHT

2098.9
1995.6

Contractor





Project : مشاريع امانة محافظة جدة				
Description : B.B.C. Mix design				
Sampled At: Plant Trial				
BITUMINOUS BASE COUESE SUPERPAVE				
Property			Sample #	
			1	2
Height of samples at N_{ini}			129.3	128.1
Average Height of samples at N_{ini}			128.7	
Height of samples at N_{des}			115.2	114.1
Average Height of samples at N_{des}			114.7	
Determination of G_{mb} @ N_{des}				
Weight of Sample (Oven Dry), g			4850.3	4853.2
Weight of Sample (Saturated Surface Dry), g			4865.8	4866.9
Weight of Sample in Water, g			2923.4	2922.1
Bulk Specific Gravity (G_{mb}) at N_{des}			2.497	2.495
Average Bulk Specific Gravity (G_{mb}) at N_{des}			2.496	
Determination of G_{mm}				
Wight of the Loose Mix, g			2103.3	2111.7
Weight of Flask With Water, g			7540.0	7540.0
Weight of Flask with Water and Loose Mix, g			8837.2	8840.2
Maximum Specific Gravity (G_{mm})			2.609	2.602
Average Maximum Specific Gravity (G_{mm})			2.606	
	Value	meet the Criteria ?	Superpave Criteria	
Asphalt Content, %	4.52	n/a	n/a	
bitumen spesific gravity , G_b	1.026	n/a	n/a	
Bulk Specific Gravity, G_{sb}	2.750	n/a	n/a	
Effective Specific Gravity, G_{se}	2.811	n/a	n/a	
% G_{mm} @ N_{ini} (G_{mb}/G_{mm}) * H_{des}/H_{ini}	85.3	Yes	89.0	
% G_{mm} @ N_{des} (G_{mb}/G_{mm})	95.8	Yes	96.0	
% Air Voids ($G_{mm}-G_{mb})/G_{mb}$	4.2	Yes	4.0	
% VMA $100-(G_{mb}*P_s)/G_{sb}$	13.3	Yes	12.0	
			14.0	
% VFA ($(G_{mb}*P_{be}/G_b)*100/VMA$)	68	Yes	65.0	
			75.0	
Asphalt Absorption, (P_{ba}) ($(G_{se}-G_{sb})/(G_{sb}*G_{se})*G_b*100$)	0.81	n/a	n/a	
% Passing 0.075 mm Sieve	5.16%	n/a	n/a	
Effective asphalt binder content (P_{be}) $P_b-((100-P_b)*(P_{ba}/100))$	3.8%	n/a	n/a	
Dust Proportion (DP ratio) %Passing # 200/(P_{be})	1.37	Yes	0.80	
			1.60	
(2) Verification of the HMA Volumetric Properties at N_{max}				
Property			Sample #	
			1	2
Determination of G_{mb} @ N_{max}				
Weight of Sample (Oven Dry), g			4861.3	4857.1
Weight of Sample (Saturated Surface Dry), g			4867.8	4863.6
Weight of Sample in Water, g			2925.8	2931.4
Bulk Specific Gravity (G_{mb}) at N_{max}			2.503	2.514
Average Bulk Specific Gravity (G_{mb}) at N_{max}			2.509	
Property	Average	G_{mm} @ N_{max}	Meet the Criteria ?	Superpave Criteria, MAX.
Bulk Specific Gravity, G_{mb} @ N_{max}	2.509	96.3	Yes	98.0
Maximum Specific Gravity, G_{mm}	2.606			
CONTRACTOR				



Start Of Test : Monday, March 02, 2020 11:42:35

Parameter File : c:\documents and settings\all users\application data\bohlin\rotational\asphalt tests\rtfo g
Description : RTFO Binder Grade

Sample Reference : none

Measuring System : PP 25 DSR
Gap Setting : 1.000 mm

Parameter Summary :

No. Test Runs : 1
Temp Mode : ISOTHERMAL 64.0 °C
Thermal Equilibrium Time : 600.00 s
Pre-Shear : OFF

Shear mode : Controlled Stress
Oscillation Mode: Grade Sample Mode : (R)TFOT
Frequency : 10.0 rad/s No. Samples : 1
Target Strain : 10.0 %
Temperature : 64.0 °C
Thermal Equilibrium Time : 600 s

Time	Temperature	Frequency	Phase Angle	Complex Modulus	Elastic Modulus	Viscous Modulus	Complex Viscosity	Shear Stress	Strain
t (s)	T (°C)	f (Hz)	δ (°)	G^* (Pa)	G' (Pa)	G'' (Pa)	η^* (Pa.s)	σ (Pa)	γ (%)
26.8057	76.22	1.5957e+00	80.07	3.1665e+03	6.4608e+02	3.1192e+03	3.1663e+02	3.2042e+02	1.013858e-01
26.7555	81.93	1.5957e+00	79.20	1.7340e+03	3.5450e+02	1.6974e+03	1.7295e+02	1.7415e+02	1.007841e-01

Final Results :

Pass Fail Temp : 79.9 °C
Grade : 76

Temperature : 76.2 °C
 $G^*/\sin(\delta)$: 3.2148 kPa
Result : Pass

Temperature : 81.9 °C

MALVERN INSTRUMENTS

G*/sin(delta) : 1.7715 kPa

Result : Fail

Integrated DSR10 M : OSCILLATION

Start Of Test : Monday, March 02, 2020 09:15:03

Parameter File : c:\documents and settings\all users\application data\bohlin\rotational\asphalt tests\ob gr
Description : Original Binder Grade

Sample Reference : none

Measuring System : PP 25 DSR

Gap Setting : 1.000 mm

Parameter Summary :

No. Test Runs : 1

Temp Mode : ISOTHERMAL 64.0 °C

Thermal Equilibrium Time : 600.00 s

Pre-Shear : OFF

Shear mode : Controlled Stress

Oscillation Mode: Grade Sample Mode : OB

Frequency : 10.0 rad/s No. Samples : 1

Target Strain : 12.0 %

Temperature : 64.0 °C

Thermal Equilibrium Time : 600 s

Time t (s)	Temperature T (°C)	Frequency f (Hz)	Phase Angle δ (°)	Complex Modulus G* (Pa)	Elastic Modulus G' (Pa)	Viscous Modulus G'' (Pa)	Complex Viscosity η^* (Pa.s)	Shear Stress σ (Pa)	Strain γ (%)
26.8068	70.02	1.5957e+00	78.59	2.1491e+03	4.2517e+02	2.1087e+03	2.1436e+02	2.8934e+02	1.210061e-01
26.7640	76.04	1.5957e+00	75.98	1.1038e+03	2.6738e+02	1.0709e+03	1.1008e+02	1.3229e+02	1.209351e-01
26.8087	82.02	1.5957e+00	71.44	6.0223e+02	1.9164e+02	5.7093e+02	6.0068e+01	7.0616e+01	1.190695e-01

Final Results :

Pass Fail Temp : 77.4 °C

Grade : 76

Temperature : 70.0 °C

G*/sin(δ) : 2.1925 kPa

Result : Pass

MALVERN INSTRUMENTS

Temperature : 76.0 °C

$G^*/\sin(\delta)$: 1.1376 kPa

Result : Pass

Temperature : 82.0 °C

$G^*/\sin(\delta)$: 0.63525 kPa

Result : Fail

Integrated DSR10 M : OSCILLATION



SAND EQUIVALENT TEST

(AASHTO T 176-73, MRDTM - 313)

Project: مشاريع أمانة محافظة جدة
Description: Samples Form Hot Bin
Sampled At: Asphal Plant

Determination no.	1	2	3
Sand Reading	4.1	3.8	4.3
Clay Reading	7.0	6.3	6.8
% Sand Equivalent	58.6	60.3	63.2
Adjusted % Sand Equivalent	59	61	64
Average % Sand Equivalent	61.3		
Adjusted Average % Sand Equivalent	62.0		

Remarks: Specified 45 % Minimum.



Contractor



SOUNDNESS OF AGGREGATE BY USE OF SODIUM SULPHATE

MRDTM - 311, AASHTO T - 104

Project: مشاريع امانة محافظة جدة

Description: Samples Form Hot Bin

Sampled At: Asphalt Plant

Coarse Aggregate

SIEVE SIZE		ORIGINAL GRADING %	WT. OF TEST SAMPLE	AFTER TEST SIEVE SIZE	RETAINED MASS g	PASSING MASS g	Passing Mass %	WEIGHTED PER.Mass
PASSING	RETAINED	A	B	C	D	E	F	G
1"	3/4"	16.3	1500.4	5/8"	1495.6	4.8	0.32	0.05
3/4"	3/8"	26.6	1000.9	5/16"	965.8	35.1	3.51	0.93
3/8"	No.4	22.4	301.7	No. 5	286.3	15.4	5.10	1.14
TOTAL		65.30						2.13

Loss Corrected for 100% =

3.26

Specified Loss % =

10.0 Max.

Fine Aggregate

SIEVE SIZE		ORIGINAL GRADING %	WT. OF TEST SAMPLE	AFTER TEST SIEVE SIZE	RETAINED MASS g	PASSING MASS g	Passing Mass %	WEIGHTED PER.Mass
PASSING	RETAINED	A	B	C	D	E	F	G
No: 4	No: 8	12.5	101.3	No. 8	96.3	5.0	4.94	0.62
No: 8	No: 16	6.4	100.0	No. 16	96.5	3.5	3.50	0.22
No: 16	No: 30	4.0	102.1	No. 30	94.3	7.8	7.64	0.31
No: 30	No: 50	2.0	100.4	No. 50	97.3	3.1	3.09	0.06
TOTAL		24.90						1.21

Loss Corrected for 100% =

4.85

Specified Loss % =

10.0 Max.

REMARKS:

Sodium Sulphate Solution was used for test with sp.gr of 1.162

M.E Contractor





SPECIFIC GRAVITY AND ABSORPTION OF AGGREGATES

MRDTM 304 & 305, AASHTO T-84 & 85

COARSE AGGREGATE

Project : مشاريع امانة محافظة جدة
Description: 1" Agg. From Hot Bin
Sampled At: Asphal Plant

Description	1	2	Average
1. Weight of saturated surface dry sample in air (gm)	3568.4	3682.5	
2. Weight of Oven dry sample in air (gm)	3536.1	3647.8	
3. Weight of saturated surface dry sample in water (gm)	2296.8	2370.0	
4. Absorption = Line1 - Line 2, (gm)	32.3	34.7	
5. % Absorption = Line 4/Line 2 * 100	0.91	0.95	0.932
6. Specific Gravity:			
(a) Bulk, Oven-dry = Line 2/(Line1 - Line 3)	2.781	2.779	2.780
(b) Bulk, sat.surf.dry = Line1/(Line1 - Line 3)	2.806	2.806	2.806
(c) Apparent = Line 2/(Line2 - Line 3)	2.853	2.855	2.854

FINE AGGREGATE

Project: _____
Description: _____
Sampled At: _____

Sample No: _____
Sampled by: _____
Date sampled: _____

Description	1	2	Average
7. Weight of saturated surface dry sample (gm)			
8. Weight of Oven dry sample (gm)			
9. Weight of bottle filled with water (gm)			
10. Wt. Of bottle with sat.surf.dry sample & water (gm)			
11. Absorption = (Line 7 - Line 8)			
12. % Absorption = Line 11/Line8 * 100			
13. Specific Gravity:			
(a) Bulk, Oven-dry = Line 8 / (Line 7+Line 9-Line 10)			
(b) Bulk, sat.surf.dry = Line7 / (Line 7+Line 9 - Line 10)			
(c) Apparent = Line 8 / (Line 8 + line 9 - Line 10)			

Contractor





SPECIFIC GRAVITY AND ABSORPTION OF AGGREGATES

MRDTM 304 & 305 , AASHTO T- 84 & 85

COARSE AGGREGATE

Project: مشاريع امانة محافظة جدة
Description: 3/4" Agg. From Hot Bin
Sampled At: Asphalt Plant

Description	1	2	Average
1. Weight of saturated surface dry sample in air (gm)	2566.0	2688.0	
2. Weight of Oven dry sample in air (gm)	2536.6	2658.3	
3. Weight of saturated surface dry sample in water (gm)	1645.8	1725.4	
4. Absorption = Line 1 - Line 2, (gm)	29.4	29.7	
5. % Absorption = Line 4/Line 2 * 100	1.16	1.12	1.14
6. Specific Gravity:			
(a) Bulk, Oven-dry = Line 2/(Line 1 - Line 3)	2.757	2.762	2.759
(b) Bulk, sat.surf.dry = Line 1/(Line 1 - Line 3)	2.789	2.792	2.790
(c) Apparent = Line 2/(Line 2 - Line 3)	2.848	2.850	2.849

FINE AGGREGATE

Project: _____ Sample No: _____
Description: _____ Sampled by: _____
Sampled At: _____ Date sampled: _____

Description	1	2	Average
7. Weight of saturated surface dry sample (gm)			
8. Weight of Oven dry sample (gm)			
9. Weight of bottle filled with water (gm)			
10. Wt. Of bottle with sat.surf.dry sample & water (gm)			
11. Absorption = (Line 7 - Line 8)			
12. % Absorption = Line 11/Line 8 * 100			
13. Specific Gravity:			
(a) Bulk, Oven-dry = Line 8 / (Line 7+Line 9-Line 10)			
(b) Bulk, sat.surf.dry = Line 7 / (Line 7+Line 9 - Line 10)			
(c) Apparent = Line 8 / (Line 8 + line 9 - Line 10)			

Contractor





SPECIFIC GRAVITY AND ABSORPTION OF AGGREGATES

MRD TM 304 & 305, AASHTO T- 84 & 85

COARSE AGGREGATE

Project: : مشاريع امانة محافظة جدة
Description: 3/8" Agg. From Hot Bin
Sampled At: Asphalt Plant

Description	1	2	Average
1. Weight of saturated surface dry sample in air (gm)	2484.1	2382.6	
2. Weight of Oven dry sample in air (gm)	2451.6	2352.9	
3. Weight of saturated surface dry sample in water (gm)	1586.3	1523.6	
4. Absorption = Line 1 - Line 2, (gm)	32.5	29.7	
5. % Absorption = Line 4/Line 2 * 100	1.33	1.26	1.29
6. Specific Gravity:			
(a) Bulk, Oven-dry = Line 2/(Line 1 - Line 3)	2.731	2.739	2.735
(b) Bulk, sat.surf.dry = Line 1/(Line 1 - Line 3)	2.767	2.774	2.770
(c) Apparent = Line 2/(Line 2 - Line 3)	2.833	2.837	2.835

FINE AGGREGATE

Project: _____ Sample No: _____
Description: _____ Sampled by: _____
Sampled At: _____ Date sampled: _____

Description	1	2	Average
7. Weight of saturated surface dry sample (gm)			
8. Weight of Oven dry sample (gm)			
9. Weight of bottle filled with water (gm)			
10. Wt. Of bottle with sat.surf.dry sample & water (gm)			
11. Absorption = (Line 7 - Line 8)			
12. % Absorption = Line 11/Line 8 * 100			
13. Specific Gravity:			
(a) Bulk, Oven-dry = Line 8 / (Line 7+Line 9-Line 10)			
(b) Bulk, sat.surf.dry = Line 7 / (Line 7+Line 9 - Line 10)			
(c) Apparent = Line 8 / (Line 8 + line 9 - Line 10)			

Contractor





SPECIFIC GRAVITY AND ABSORPTION OF AGGREGATES

MRDTM 304 & 305, AASHTO T- 84 & 85

COARSE AGGREGATE

Project: : مشروع امانة محافظة جدة
Description: Crushed sand
Sampled At: Asphalt Plant

Description	1	2	Average
1. Weight of saturated surface dry sample in air (gm)			
2. Weight of Oven dry sample in air (gm)			
3. Weight of saturated surface dry sample in water (gm)			
4. Absorption = Line1 - Line 2, (gm)			
5. % Absorption = Line 4/Line 2 * 100			
6. Specific Gravity:			
(a) Bulk, Oven-dry =Line 2/(Line1 - Line 3)			
(b) Bulk, sat.surf.dry =Line1/(Line1 - Line 3)			
(c) Apparent = Line 2/(Line2 - Line 3)			

FINE AGGREGATE

Project: مشروع امانة محافظة جدة
Description: Crushed sand from hot bin
Sampled At: Asphalt Plant

Description	1	2	Average
7. Weight of saturated surface dry sample (gm)	493.3	494.0	
8. Weight of Oven dry sample (gm)	486.0	486.0	
9. Weight of bottle filled with water (gm)	703.7	703.7	
10. Wt. Of bottle with sat.surf.dry sample & water (gm)	1018.6	1019.2	
11. Absorption = (Line 7 - Line 8)	7.3	8.0	
12. % Absorption = Line 11/Line8 * 100	1.50	1.65	1.574
13. Specific Gravity:			
(a) Bulk, Oven-dry =Line 8 / (Line 7+Line 9-Line 10)	2.724	2.723	2.723
(b) Bulk, sat.surf.dry =Line7 / (Line 7+Line 9 - Line 10)	2.765	2.768	2.766
(c) Apparent = Line 8 / (Line 8 + line 9 - Line 10)	2.840	2.850	2.845





ABRASION OF COARSE AGGREGATE

By the use of Los Angeles machine

Project: مشاريع امانة محافظة جدة

Description: Blended Hot Bin

Sampled at: Asphalt Plant

Contractor

ABRASION OF COARSE AGGREGATE BY USE OF THE LOS ANGELES MACHINE.

SAMMARY

	B	C	D	AVERAGE
PERCENTAGE OF WEAR	23.0	23.7	25.2	24.0

REMARKS:

Specification Required - 40 % Maximum

Contractor





CLAY LUMPS AND FRIABLE PARTICLES

MRDTM - 312 , AASHTO T - 112

Project: مشاريع امانة محافظة جدة

Description: Samples Form Hot Bin

Sampled At: Asphal Plant

Sampled by: _____

SIEVE SIZE		ORIGINAL GRADING %	WT. OF TEST SAMPLE	AFTER TEST SIEVE SIZE	RETAINED MASS g	PASSING MASS g	PERCENT CLAY	WEIGHTED PER. CLAY
PASSING	RETAINED	A	B	C	D	E	F	G
1"	3/4"	16.3	2503.4	No. 4	2501.7	1.7	0.07	0.0111
3/4"	3/8"	26.6	2512.7	No.4	2510.5	2.2	0.09	0.0233
3/8"	NO 4	22.4	2500.3	No.8	2496.1	4.2	0.17	0.0376
NO 4	NO 8	12.5	1501.9	No.16	1499.2	2.7	0.18	0.0225
TOTAL		77.8						0.0945

Clay Lumps Corrected for 100% = 0.12

Specified Loss%= 0.25 Max.

REMARKS:

M.E Contractor





Project:
Description
Sampled at:

مشاريع امانة محافظة جدة
Hot Bin Samples
Asphalt Plant

Sampled No: _____

DETERMINATION OF PERCENTAGE OF CRUSHED AGGREGATE

CRUSHED FRACTION DETERMINATION

Passing	Retained	Test Mass (A)	Crushed Mass (B)	Percent Crushed
1"	3/4"	1500.3	1487.2	99.1
3/4"	3/8"	1501.2	1490.1	99.3
3/8"	#4	301.7	291.5	96.6

CALCULATIONS

Passing	Retained	Test Portion %	Percent Crushed	Weighted % Crushed
1"	3/4"	16.3	99.1	16.16
3/4"	3/8"	26.6	99.3	26.40
3/8"	#4	22.4	96.6	21.64
Total		65.3		64.2

Total Test Portion % (C) = 65.3
Total Weighted % Crushed (D) = 64.2
Weighted Average Percent Crushed Particles = $D/C * 100 = 98.3 \%$
Specified for One Face Crushed = 95.0 %

Contractor





Project: مشاريع امانة محافظة جدة
Description: Samples Form Hot Bin
Sampled At: Asphal Plant

Sampled by:

UNCOMPACTED VOID CONTENT OF FINE AGGREGATES

(AASHTO T 304-96)

Calibrated Volume of Cylinder:

V = 101 ml.

Specific Gravity of Aggregate:

G = 2.72

Method A: Standard Graded Sample

Ret. on Sieve	Mass (g)
No. 16	44
No. 30	57
No. 50	72
No. 100	17
	190 ± 0.2

Determination no.	1	2
Weight of Empty Cylinder(W ₁) gms.	466.6	466.6
Weight of Cylinder with Loose Aggregate(W ₂) gms.	609.0	610.2
Weight of Loose Aggregate, F=(W ₂ -W ₁) gms.	142.4	143.6
Uncompacted Void Content, U=((V-F/G)/V)100, %	48.2	47.7
Average:	47.9	ok

Remarks: Specified limit ≥ 45%.

Contractor





SIEVE ANALYSIS
MRDTM - 204, AASHTO T 27

Project : مشاريع امانة محافظة جدة
Description : Filler
Sampled at : Asphalt Plant

Weight of Sample (grams):

Original Wt,gm _____ Oven Dry Wt,g _____ 302.1 Wash Oven Dry Wt.,gm _____ 30.1

Sieve size	Weight Retained (grams)	Cum. Wt. Passing (grams)	Cum. Passing (percent)	Cum. Retained (percent)	Retained Percent	Specifi-cations (%Passing)	Remarks
3"							
2 1/2"							
2"							
1 1/2"							
1"							
3/4"							
1/2"							
3/8"							
No.4	0	302	100.0				
No.8	0	302	100.0				
No. 10							
No. 16	0.0	302.1	100.0				
No. 30	0.0	302.1	100.0				
No. 40							
No. 50	9.0	293.1	97.0				
No. 80							
No. 100	21.0	281.1	93.0				
No. 200	33.1	269.0	89.0				
Pan	1.1						
Wash Passing No 200	267.9						
Total:	302.1						

Remarks: _____

Contractor





SIEVE ANALYSIS
MRDTM - 204, AASHTO T 27

Project : مشاريع امانة محافظة جدة
Description : C.Sand
Sampled at : Asphalt Plant

Weight of Sample (grams):
Original Wt,gm _____ Oven Dry Wt,g _____ 1515.6 Wash Oven Dry Wt.,gm _____ 1419.50

Sieve size	Weight Retained (grams)	Cum. Wt. Passing (grams)	Cum. Passing (percent)	Cum. Retained (percent)	Retained Percent	Specifi-cations (%Passing)	Remarks
3"							
2 1/2"							
2"							
1 1/2"							
1"							
3/4"							
1/2"							
3/8"	0.0	1516	100.0				
No.4	42.1	1474	97.2				
No.8	524.3	991	65.4				
No. 10							
No. 16	881.4	634.2	41.8				
No. 30	1099.0	416.6	27.5				
No. 40							
No. 50	1205.6	310.0	20.5				
No. 80							
No. 100	1332.0	183.6	12.1				
No. 200	1416.5	99.1	6.5				
Pan	3.0						
Wash Passing No.200	96.1						
Total:	1516						

Remarks: _____

Contractor



SIEVE ANALYSIS
MRDIM - 204, AASHTO T 27

Project : مشاريع امانة محافظة جدة
Description : 3/8" Agg From Hot Bin
Sampled at : Asphalt Plant

Weight of Sample (grams):

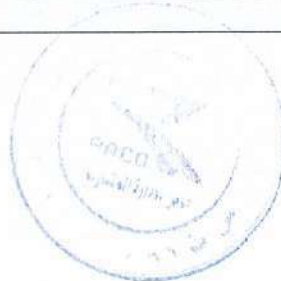
Original Wt.,gm _____ Oven Dry Wt.,g 2643.1 Wash Oven Dry Wt.,gm _____

Sieve size	Weight Retained (grams)	Cum. Wt. Passing (grams)	Cum. Passing (percent)	Cum. Retained (percent)	Retained Percent	Specifi-cations (%Passing)	Remarks
3"							
2 1/2"							
2"							
1 1/2"							
1"							
3/4"	0.0	2643.1	100.0				
1/2"	0.0	2643.1	100.0				
3/8"	33.6	2609.5	98.7				
No.4	2220.1	423.0	16.0				
No.8	2639.2	3.9	0.1				
No. 10							
No. 16	2640.1	3.0	0.1				
No. 30	2641.3	1.8	0.1				
No. 40							
No. 50							
No. 80							
No. 100							
No. 200							
Pan							
Wash Passing No.200							
Total:	2643.1						

Remarks: _____

Contractor







MRDTM - 204, AASHTO T 27

Project	مشاريع امانة محافظة جدة
Description	3/8" Agg from Hot bin
Sampled at	Asphalt Plant

Original Wt,gm	Oven Dry Wt,g	2582.9	Wash Oven Dry Wt.,gm
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Sieve size	Weight Retained (grams)	Cum. Wt. Passing (grams)	Cum. Passing (percent)	Cum. Retained (percent)	Retained Percent	Specifications (%Passing)	Remarks
3"							
2 1/2"							Average
2"							
1 1/2"							
1"							
3/4"	0.0	2582.9	100.0				100.0
1/2"	0.0	2582.9	100.0				100.0
3/8"	42.1	2540.8	98.4				98.5
No.4	2181.0	401.9	15.6				15.8
No.8	2579.3	3.6	0.1				0.1
No. 10							
No. 16	2580.3	2.6	0.1				0.1
No. 30	2581.4	1.5	0.1				0.1
No. 40							
No. 50							
No. 80							
No. 100							
No. 200							
Pan							
Wash Passing No.200							
Total:	2582.9						

Remarks:

Contractor





SIEVE ANALYSIS
MRDTM - 204, AASHTO T 27

Project : مشاريع امانة محافظة جدة
Description : 3/4" Agg
Sampled at : Asphalt Plant

Weight of Sample (grams):
Original Wt, gm _____ **Oven Dry Wt, g** 2846.5 **Wash Oven Dry Wt., gm** _____

Sieve size	Weight Retained (grams)	Cum. Wt. Passing (grams)	Cum. Passing (percent)	Cum. Retained (percent)	Retained Percent	Specifi-cations (%Passing)	Remarks
3"							
2 1/2"							
2"							
1 1/2"							
1"							
3/4"	0.0	2846.5	100.0				
1/2"	865.9	1980.6	69.6				
3/8"	2253.4	593.1	20.8				
No.4	2842.6	3.9	0.1				
No.8							
No. 10							
No. 16							
No. 30							
No. 40							
No. 50							
No. 80							
No. 100							
No. 200							
Pan							
Wash Passing No.200							
Total:	2846.5						

Remarks: _____

Contractor





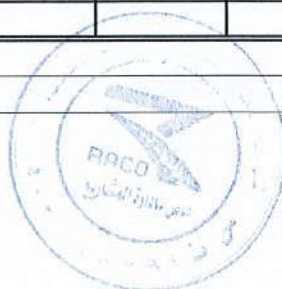
MRDTM - 204, AASHTO T 27

Sampled at Asphalt Plant

2831.4

Remarks:

Cer





SPECIFIC GRAVITY AND ABSORPTION OF AGGREGATES

MRDTM 304 & 305, AASHTO T- 84 & 85

COARSE AGGREGATE

Project: مشاريع امانة محافظة جدة
Description: Filler
Sampled At: Asphalt plant

Description	1	2	Average
1. Weight of saturated surface dry sample in air (gm)			
2. Weight of Oven dry sample in air (gm)			
3. Weight of saturated surface dry sample in water (gm)			
4. Absorption = Line1 - Line 2, (gm)			
5. % Absorption = Line 4/Line 2 * 100			
6. Specific Gravity:			
(a) Bulk, Oven-dry =Line 2/(Line1 - Line 3)			
(b) Bulk, sat.surf.dry =Line1/(Line1 - Line 3)			
(c) Apparent = Line 2/(Line2 - Line 3)			

FINE AGGREGATE

Project: مشاريع امانة محافظة جدة
Description: Filler
Sampled At: Asphalt plant

Description	1	2	Average
7. Weight of saturated surface dry sample (gm)			
8. Weight of Oven dry sample (gm)	475.9	477.1	
9. Weight of bottle filled with water (gm)	675.6	675.6	
10. Wt. Of bottle with sat.surf.dry sample & water (gm)	979.5	980.5	
11. Absorption = (Line 7 - Line 8)			
12. % Absorption = Line 11/Line8 * 100			
13. Specific Gravity:			
(a) Bulk, Oven-dry =Line 8 / (Line 7+Line 9-Line 10)			
(b) Bulk, sat.surf.dry =Line7 / (Line 7+Line 9 - Line 10)			
(c) Apparent = Line 8 / (Line 8 + line 9 - Line 10)	2.767	2.771	2.769

Contractor





Project: مشاريع امانة محافظة جدة
Description: Samples Form Hot Bin
Sampled At: Asphal Plant

THIN AND ELONGATED PARTICLES

AASHTO M-80 , ASTM C-125

COARSE AGGREGATE

SIEVE SIZES	1" - 3/4"	3/4" - 3/8"	3/8" - # 4	Total
Total Wt. of Sample, gm.	3005.1	2500.6	1251.0	6756.7
Wt. of Thin and Elongated particles, gm	85.0	68	91	244.0
% Thin and Elongated particles	2.8	2.7	7.3	12.8
Original Grading % Retained	16.3	26.6	22.4	65.3
Weighted % Thin and Elongated particles	0.5	0.7	1.6	2.8
Thin and Elongated particles, adjusted for 100 %	4.3			

Remarks: Specified %max. 10

M.E Contractor





ABRASION OF COARSE AGGREGATE

By the use of Los Angeles machine

Project: مشاريع امانة محافظة جدة

Description: Blended Hot Bin

Sampled at: Asphalt Plant

TYPE OF GRADING					
SIEVE ANALYSIS		WEIGHT AND GRADING OF TEST SAMPLE, gm.			
PASSING	RETAINED	A	B	C	D
1-1/2"	1"	1250			-
1"	3/4"	1250			-
3/4"	1/2"	1250	2500		-
1/2"	3/8"	1250	2500		-
3/8"	1/4"	-	-	2500	-
1/4"	NO. 4	-	-	2500	-
NO. 4	NO. 8	-	-	-	5000
Total wt. of Sample, gm.		5000	5000	5000	5000
Abrasive Charges (No. of Spheres)		12	11	8	6

(a) Weight of sample before test = 5001 gm

(b) Weight of sample after 500 rev. retained on No.12 seive = 3850 gm

(c) Percentage of wear = $100 \times [(a - b) / a]$ = 23.0 %

REMARKS: Specified % Loss= 40 Max.

Grading B is tested.

Contractor





ABRASION OF COARSE AGGREGATE

By the use of Los Angeles machine

Project: مشاريع امانة محافظة جدة

Description: Blended Hot Bin

Sampled at: Asphalt Plant

TYPE OF GRADING					
SIEVE ANALYSIS		WEIGHT AND GRADING OF TEST SAMPLE, gm.			
PASSING	RETAINED	A	B	C	D
1-1/2"	1"	1250			-
1"	3/4"	1250			-
3/4"	1/2"	1250	2500		-
1/2"	3/8"	1250	2500		-
3/8"	1/4"	-	-	2500	-
1/4"	NO .4	-	-	2500	-
NO. 4	NO. 8	-	-	-	5000
Total wt. of Sample, gm.		5000	5000	5000	5000
Abrasive Charges (No. of Spheres)		12	11	8	6

(a) Weight of sample before test = 5002 gm

(b) Weight of sample after 500 rev. retained on No.12 seive = 3815 gm

(c) Percentage of wear = $100 \times [(a - b) / a]$ = 23.73 %

REMARKS: Specified % Loss= 40 Max.
Grading C is tested.

Contractor





ABRASION OF COARSE AGGREGATE

By the use of Los Angeles machine

Project: مشاريع امانة محافظة جدة

Description: Blended Hot Bin

Sampled at: Asphalt Plant

TYPE OF GRADING					
SIEVE ANALYSIS		WEIGHT AND GRADING OF TEST SAMPLE, gm.			
PASSING	RETAINED	A	B	C	D
1-1/2"	1"	1250			-
1"	3/4"	1250			-
3/4"	1/2"	1250	2500		-
1/2"	3/8"	1250	2500		-
3/8"	1/4"	-	-	2500	-
1/4"	NO. 4	-	-	2500	-
NO. 4	NO. 8	-	-	-	5000
Total wt. of Sample, gm.		5000	5000	5000	5000
Abrasive Charges (No. of Spheres)		12	11	8	6

(a) Weight of sample before test = 5000 gm

(b) Weight of sample after 500 rev. retained on No.12 seive = 3741 gm

(c) Percentage of wear = $100 \times [(a - b) / a]$ = 25.2 %

REMARKS: Specified % Loss= 40 Max.

Grading D is tested.

Contractor





SIEVE ANALYSIS
MRDTM - 204, AASHTO T 27

Project : مشاريع امانة محافظة جدة
Description : 1" Agg from Hot bin
Sampled at : Asphalt Plant

Weight of Sample (grams):
Original Wt.,gm _____ Oven Dry Wt.,g 3158.7 Wash Oven Dry Wt.,gm _____

Sieve size	Weight Retained (grams)	Cum. Wt. Passing (grams)	Cum. Passing (percent)	Cum. Retained (percent)	Retained Percent	Specifications (%Passing)	Remarks
3"							
2 1/2"							
2"							
1 1/2"	0.0	3158.7	100.0				
1"	0.0	3158.7	100.0				
3/4"	1675.1	1483.6	47.0				
1/2"	3125.0	33.7	1.1				
3/8"	3128.0	30.7	1.0				
No.4	3142.1	16.6	0.5				
No.8	3155.2	3.5	0.1				
No. 10							
No. 16							
No. 30							
No. 40							
No. 50							
No. 80							
No. 100							
No. 200							
Pan							
Wash Passing No.200							
Total:							

Remarks: _____

Contractor





MRDTM - 204, AASHTO T 27

Original Wt, gm	Oven Dry Wt, g	3316.8	Wash Oven Dry Wt., gm	
-----------------	----------------	--------	-----------------------	--

Remarks:

[Signature]



رقم: ٤٥٠٠٢٥٤٥٤٧

تاريخ: ١٤٤٥/١٠/١٤ هـ

نسخة: أهل المعاملة



بيانات الطلب الإلكتروني

رقم الطلب	٢٨٠٤٠٤	التاريخ	الاثنين ١٣/١٠/١٤٤٥ هـ
الموضوع	بخصوص تحديث اعتماد الخلطة الاسفلتية (BBC SP)		
مقدم الطلب	طلعت محمدنور يحي حبيب الله (مفوض عن) شركة انجاز الطرق للمقاولات المحدوده		
رقم الجوال	٠٥٠٠٠٩٧٨٤٧		

ملاحظات	بخصوص تحديث اعتماد الخلطة الاسفلتية (BBC SP)
---------	--

تنويه : هذا النموذج تم تكوينه بشكل تلقائي عن طريق نظام الاتصالات الإدارية بناء على مدخلات المواطن من خلال بوابة الخدمات الالكترونية ويتحمل المواطن كامل المسؤولية القانونية لمحتوى هذا الخطاب

Certificate No :HOM/CCJ/13713

Date: June 26, 2024

M/s Enjaz Al Turk Company

Road Accomplishment Ltd . For Contracting - RACO
Jeddah - K.S.A

ISO / IEC 17025 -2017 & TUV - ISO 9001 : 2015

CERTIFICATE OF CALIBRATION

CERTIFIES THAT THE INSTRUMENT LISTED BELOW HAS BEEN TESTED / CALIBRATED USING STANDARDS WHOSE ACCURACY'S ARE TRACEABLE TO THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY USA. WITHIN THE LIMITATION OF THESE LABORATORIES CALIBRATION SERVICES, OR HAVE BEEN DERIVED BY THE RATIO OF SELF-CALIBRATION TECHNIQUES. INFORMATION ON THE CALIBRATION PROCESS AND ITS RESULTS IS GIVEN IN THE CONTINUATION AS PER ATTACHMENT OF THIS DOCUMENT.

DESCRIPTION	:	ASPHALT PLANT
PLANT	:	AMP 2500 C
SCALE TYPE	:	ELECTRONIC - METTLER TOLEDO IND 320 L
DETAILS	:	AGGRIGATE SCALE BITUMEN SCALE FILLER SCALE
PLANT LOCATION	:	BARIMAN - AREA
DATE OF CALIBRATION	:	JUNE 26, 2024
NEXT CALIBRATION DUE	:	JUNE 26, 2025

CERTIFICATE IS VALID FOR ONE (1) YEAR FROM DATE OF CALIBRATION.

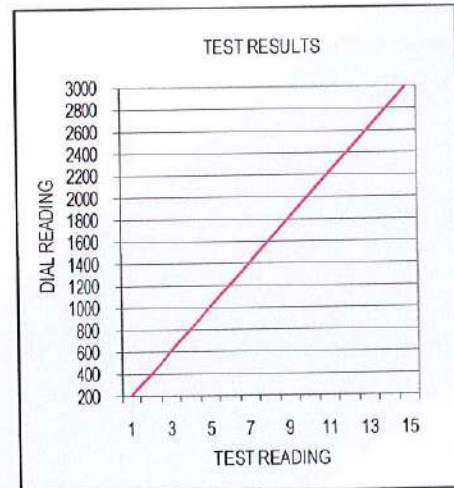
For HOUSE OF MEASUREMENT



TEST RESULT OF CALIBRATION

Company	Enjaz Al Turk Company / Road Accomplishment Ltd for Contracting RACO		
Address	Jeddaah - Bariman K.S.A		
Location	Bairam	Certificate No: HOM/CCJ/13713	
Equipment Type	Aggregate Scale	Scale Type	Mettler IND320 L
Plant	AMP 2500 C	S.No	B 511707046
Capacity	4000 Kg x 1 Kg	Date of Cal	26/06/2024

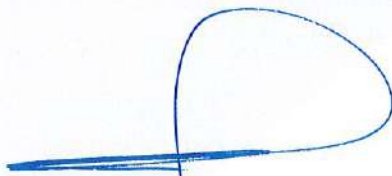
Indicator Readings	Test-1 Kg	Test-2 Kg	Test-3 Kg	Mean Kg	Error. %
200	200	200	200	200	0
400	400	400	400	400	0
605	605	605	605	605	0
803	803	803	803	803	0
1004	1004	1004	1004	1004	0
1205	1205	1205	1205	1205	0
1402	1402	1402	1402	1402	0
1603	1603	1603	1603	1603	0
1804	1804	1804	1804	1804	0
2005	2005	2005	2005	2005	0
2206	2206	2206	2206	2206	0
2403	2405	2403	2403	2404	0.03
2602	2604	2603	2602	2603	0.04
2804	2806	2805	2804	2805	0.04
3002	3005	3003	3002	3003	0.04



ABOVE INSTRUMENT HAS BEEN TESTED AND CALIBRATED BY USING SASO STANDARD ABOVE READINGS HAVE BEEN FOUND WITH IN TOLERANCE LIMIT. RESULTS ARE INTERPRETED AND COMPLAINE WITH ASTM E4-93 STANDARD.

BASIS OF TEST	WORKING WITH IN TOLERANCE LIMIT	PASS
EQUIPMENT CONDITION	EQUIPMENT WAS ADJUSTED	YES
ADDITIONAL COMMENTS	EQUIPMENT REQUIRED REPAIRING	NO

THIS CERTIFICATE IS VALID FOR ONE (1) YEAR FROM THE DATE OF CALIBRATION.


For HOUSE OF MEASUREMENT

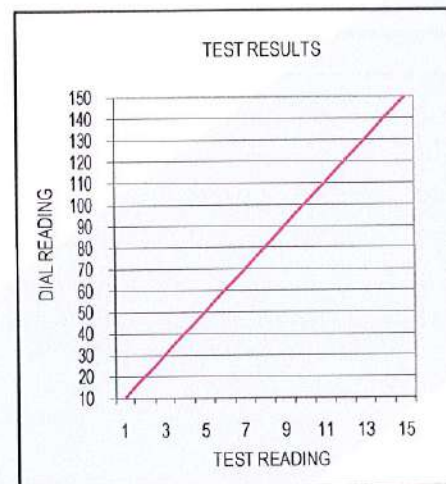



CALIBRATED BY

TEST RESULT OF CALIBRATION

Company	Enjaz Al Turk Company / Road Accomplishment Ltd for Contracting RACO		
Address	Jeddaah - Bariman K.S.A		
Location	Bairam		
	Certificate No:HOM/CC/J/13713		
Equipment Type	Bitumen Scale	Scale Type	Mettler IND320 L
Plant	AMP 2500 C	S.No	B 511707045
Capacity	400 Kg x 0.1 Kg	Date of Cal	26/06/2024

Indicator Readings	Test-1 Kg	Test-2 Kg	Test-3 Kg	Mean Kg	Error. %
10	10	10	10	10	0
20	20	20	20	20	0
30	30	30	30	30	0
40	40	40	40	40	0
50	50	50	50	50	0
60	60	60	60	60	0
70	70	70	70	70	0
80	80	80	80	80	0
90	90	90	90	90	0
100	100	100	100	100	0
110	110	110	110	110	0
120	120	120	120	120	0
130	130	130	130	130	0
140	139.9	140.0	140.0	140.0	0.02
150	149.9	150.0	150.0	150.0	0.02



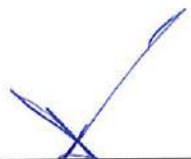
ABOVE INSTRUMENT HAS BEEN TESTED AND CALIBRATED BY USING SASO STANDARD ABOVE READINGS HAVE BEEN FOUND WITH IN TOLERANCE LIMIT. RESULTS ARE INTERPRETED AND COMPLAINE WITH ASTM E4-93 STANDARD.

BASIS OF TEST		
EQUIPMENT CONDITION	WORKING WITH IN TOLERANCE LIMIT	PASS
	EQUIPMENT WAS ADJUSTED	YES
ADDITIONAL COMMENTS	EQUIPMENT REQUIRED REPAIRING	NO

THIS CERTIFICATE IS VALID FOR ONE (1) YEAR FROM THE DATE OF CALIBRATION.


For HOUSE OF MEASUREMENT

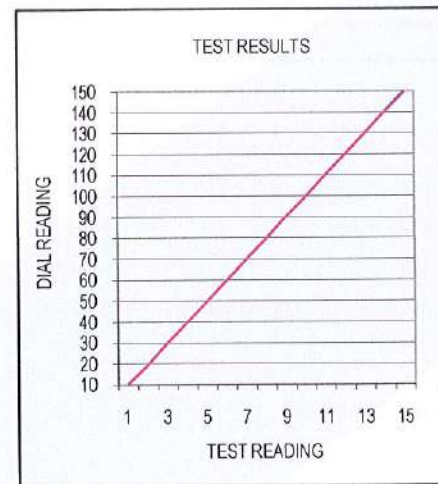



CALIBRATED BY

TEST RESULT OF CALIBRATION

Company	Enjaz Al Turk Company / Road Accomplishment Ltd for Contracting RACO		
Address	Jeddaah - Bariman K.S.A		
Location	Bairam		
	Certificate No:HOM/CCJ/13713		
Equipment Type	Filler Scale	Flow Meter	Mettler IND320 L
Plant	AMP 2500 C	S.No	B 511707044
Capacity	400 Kg x 0.1 Kg	Date of Cal	26/06/2024

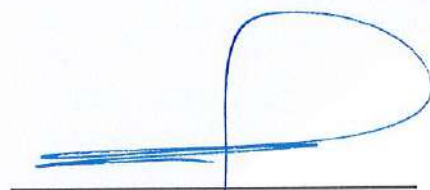
Indicator Readings	Test-1 Kg	Test-2 Kg	Test-3 Kg	Mean Kg	Error. %
10	10	10	10	10	0
20	20	20	20	20	0
30	30	30	30	30	0
40	40	40	40	40	0
50	50	50	50	50	0
60	60	60	60	60	0
70	70	70	70	70	0
80	80	80	80	80	0
90	90	90	90	90	0
100	100	100	100	100	0
110	110	110	110	110	0
120	120	120	120	120	0
130	130	130	130	130	0
140	139.9	139.9	140.0	139.9	0.05
150	149.9	149.9	150.0	149.9	0.04



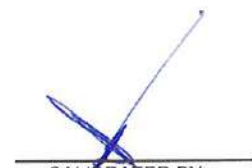
ABOVE INSTRUMENT HAS BEEN TESTED AND CALIBRATED BY USING SASO STANDARD ABOVE READINGS HAVE BEEN FOUND WITH IN TOLERANCE LIMIT. RESULTS ARE INTERPRETED AND COMPLIANCE WITH ASTM E4-93 STANDARD.

BASIS OF TEST		
EQUIPMENT CONDITION	WORKING WITH IN TOLERANCE LIMIT	PASS
	EQUIPMENT WAS ADJUSTED	YES
ADDITIONAL COMMENTS	EQUIPMENT REQUIRED REPAIRING	NO

THIS CERTIFICATE IS VALID FOR ONE (1) YEAR FROM THE DATE OF CALIBRATION.


For HOUSE OF MEASUREMENT




CALIBRATED BY